This document gives pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a Minor, Industrial permit. The discharge results from the operation of a petroleum fuel storage and distribution center. This permit action consists of updating the WOS and updating boilerplate language. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260-00

Facility Name and Mailing Fairfax Terminal Complex SIC Code: 5171 – Petroleum 1.

Address: 9601 Colonial Avenue Fairfax, VA 22031

Terminal Wholesale

Facility Location: 9601 Colonial Avenue County: **Fairfax** 

Fairfax, VA 22031

Facility Contact Name: Mr. Raymond Wagner Telephone Number: (703) 503-3687

Expiration Date of 2. Permit No.: VA0001872 December 28, 2009 previous permit:

Other VPDES Permits associated with this facility: N/A Other Permits associated with this facility: N/A

July 8, 2009

E2/E3/E4 Status: N/A

3. Owner Name: Joint Basin Corporation

Mr. Raymond Wagner / Telephone Owner Contact/Title: (703) 503-3687 Number:

Vice President

Permit Drafted By: Date Drafted: Susan Mackert September 17, 2009

October 2, 2009 Alison Thompson Draft Permit Reviewed By: Date Reviewed: October 5, 2009

Public Comment Period: Start Date: November 21, 2009 End Date: December 21, 2009

5. Receiving Waters Information:

Application Complete Date:

4.

Receiving Stream Name: Daniels Run, UT

Drainage Area at Outfall: River Mile: XIV0.18 <5 sq.mi.

Stream Basin: Potomac River Subbasin: Potomac River

Section: 7 Stream Class: III

b Special Standards: Waterbody ID: VAN-A15R

0 MGD 7Q10 Low Flow: 7Q10 High Flow: 0 MGD 1Q10 Low Flow: 0 MGD 1Q10 High Flow: 0 MGD Harmonic Mean Flow: 0 MGD 30Q5 Flow: 0 MGD 30Q10 Flow: 303(d) Listed: No 0 MGD

TMDL Approved: Yes – Accotink Creek Date TMDL Approved: 5-31-02 (bacteria) TMDL Approved: Yes – Accotink Creek Date TMDL Approved: 12-18-08 (bacteria)

The above TMDLs are for downstream 303(d) listed impairments.

It is staff's best professional judgement that based on a drainage area of 5 sq.mi or less, critical flows will be equal to 0.

6.	Statu	tory or Regulatory	Basis	for Special Conditions and Effluent Li	imita	tions:
	$\checkmark$	State Water Con	trol L	aw		EPA Guidelines
	<b>√</b>	Clean Water Ac	t	_	✓	Water Quality Standards
	<b>√</b>	VPDES Permit I	Regula	ation	,	Other
	<b>✓</b>	EPA NPDES Re	gulati	on		
7.	Licen	sed Operator Requ	iirem	ents: N/A		
8.	Relia	bility Class: N/A				
9.	Perm	it Characterization	:			
	$\checkmark$	Private		Effluent Limited		Possible Interstate Effect
		Federal	$\checkmark$	Water Quality Limited		Compliance Schedule Required
		State	<b>√</b>	Toxics Monitoring Program Required		Interim Limits in Permit
		POTW		Pretreatment Program Required		Interim Limits in Other Document
		TMDL				

# 10. Wastewater Sources and Treatment Description:

The Joint Basin Corporation consists of four companies that operate petroleum product distribution terminals on Colonial Avenue in Fairfax, Virginia. The four companies which comprise the Joint Basin Corporation are BP, TransMontaigne, Citgo, and Motiva. The terminals receive product from the Colonial Pipeline which is stored in numerous above ground storage tanks (ASTs) located within diked areas of the four properties. Product is distributed by tanker truck and via the Colonial Pipeline.

There are numerous sources that can contribute flow to the shared storm water impoundment basin. Each terminal is responsible for the operation and maintenance of the equipment and best management practices on their respective properties. Flow schematics for each terminal were provided as part of permit application package and are found as Attachment 1.

This permit also regulates flows from various internal outfalls: Internal Outfall 101 (oil-water separator from BP), Internal Outfall 102 (oil-water separator from TransMontaigne), Internal Outfall 103 (oil-water separator bypass from TransMontaigne), and Internal Outfall 106 (hydrostatic tank test waters). During this reissuance, Motiva requested the option to discharge hydrostatic test water to the storm water impoundment basin. With this reissuance, discharge of hydrostatic test water from Motiva shall also be authorized at Internal Outfall 106.

#### **Hydrostatic Test Waters**

This discharge is generated as needed to test the integrity of the ASTs and the transport trucks. As part of the application package, each facility provided estimates of frequency, flow rate, and duration for hydrostatic test waters from their terminal. These estimates are found as Attachment 2. Hydrostatic testing has not occurred since May 2004.

### Storm Water Impoundment Basin

The Joint Basin's consultant, URS, provided a complete summary of the various sources contributing flow to the storm water impoundment basin. This summary is found as Attachment 3. In addition to the flows from the four terminals, the Basin also receives flow from an adjacent golf course, roads, and a residential area. The current permit requires sampling and monitoring during a storm event from Outfall 001. This outfall is designated at Outfall 901 for this storm sampling.

See Attachment 4 for the NPDES Permit Rating Worksheet.

	TABLE 1 – Outfall Description									
Outfall Number	Discharge Sources	Treatment	Flow	Outfall Latitude and Longitude						
001	Industrial Wastewater / Storm Water	Sedimentation	0.220 MGD	38° 51' 03? N 77° 16' 30? W						
101	Industrial Wastewater / Storm Water	Oil-Water Separator	See Attachment 1	38° 51' 03? N 77° 16' 30? W						
102	Industrial Wastewater / Storm Water	Oil-Water Separator	See Attachment 1	38° 51' 03? N 77° 16' 30? W						
103	Industrial Wastewater / Storm Water Bypass	Sedimentation	See Attachment 1	38° 51' 03? N 77° 16' 30? W						
106	Hydrostatic Tank Test Water	Sedimentation	See Attachment 1	38° 51' 03? N 77° 16' 30? W						
901	Industrial Storm Water	Sedimentation	Variable	38° 51' 03? N 77° 16' 30? W						
See Attachmer	nt 5 for (Fairfax, DEQ #205	B) topographic map.								

# 11. Sludge Treatment and Disposal Methods:

The Joint Basin Corporation facility is a petroleum fuel storage and distribution center that does not treat domestic sewage and does not produce sewage sludge.

# 12. Discharges, Intakes, Monitoring Stations, Other Items in Vicinity of Discharge:

The facilities and monitoring stations listed below either discharge to or are located within the following waterbody: VAN-A15R

	TABLE 2					
DEQ monitoring station located approximately 7.5 miles downstream of the disc location on Accotink Creek at the Route 620 bridge crossing.						
1aACO018.48	DEQ monitoring station located on Accotink Creek at Route 846.					
1aACO004.84	DEQ monitoring station located on Accotink Creek at Route 611.					
VA0001945	Kinder Morgan Southeast Terminals, LLC (Accotink Creek, UT)					
VA0001988	Motiva Enterprises, LLC – Springfield (Accotink Creek, UT)					
VA0002283	Motiva Enterprises, LLC – Fairfax (Crook Branch)					
VA0057380	Quarles Petroleum – Newington (Accotink Creek, UT)					
VAR050988	Canada Dry – Springfield (Accotink Creek)					
VAR051042	SICPA Securink Corporation (Accotink Creek)					
VAR051047	Fairfax County – Connector Bus Yard (Long Branch)					
VAR051053	United Parcel Service – Springfield (Flag Run)					
VAR051066	U.S. Postal Service – Merrifield (Long Branch, UT)					
VAR051080	U.S. Army – Fort Belvoir (Accotink Creek)					
VAR051100	Shenandoah's Pride Dairy (Flag Run)					
VAR051565	Rolling Frito Lay Sales (Accotink Creek)					

VAR051719	National Asphalt Paving Company (Accotink Creek)
VAR051770	Fairfax County – Jermantown Maintenance Facility (Accotink Creek)
VAR051795	HD Supply (Accotink Creek)
VAR051863	United Parcel Service – Newington (Accotink Creek)
VAG110046	Newington Concrete (Accotink Creek, UT)
VAG110069	Mid Atlantic Materials (Accotink Creek, UT)
VAG830091	U.S. Army – Fort Belvoir (Pohick Creek, UT)
VAG830285	U.S. Army – Fort Belvoir (Gunston Cove)
VAG830286	U.S. Army – Fort Belvoir (Accotink Bay)

# 13. Material Storage:

A current list of materials stored on site was provided by the facility as part of the permit application package. This information is found as Attachment 6.

**Site Inspection:** Performed by Terry Nelson on July 24, 2006. Due to staffing and budget constraints, permitting staff did not conduct a site inspection in conjunction with the permit reissuance. Facility operations have not changed since the 2006 inspection and it is staff's best professional judgement that the application package received on June 26, 2009, is accurate and representative of actual site conditions.

# 15. Receiving Stream Water Quality and Water Quality Standards:

## a) Ambient Water Quality Data

The nearest Department of Environmental Quality ambient monitoring station, 1aACO014.57, is located in segment VAN-A15R\_ACO02A00 approximately 7.5 miles downstream from the outfall location. This segment begins at the confluence with Crooks Branch, upstream from Route 846, and continues downstream until the start of Lake Accotink. The receiving stream, VAN-A15R\_ACO02A00, is not listed on the current 303(d) list.

The 2008 Virginia Water Quality Assessment 305(b)/303(d) Integrated Report (IR) gives an impaired classification for the following.

### Recreation Use Impairment

VAN-A15R\_ACO04A02: Sufficient excursions from the instantaneous *E. coli* bacteria criterion (13 of 13 samples – 100%) were recorded at USGS monitoring station 01653900 to assess this stream segment as not supporting of the recreation use goal for the 2006 water quality assessment. The segment was previously listed for a fecal coliform bacteria impairment, from 2002 through 2004. The *E. coli* bacteria impairment was first listed in 2004. This assessment was carried over from the 2006 report as insufficient *E. coli* monitoring data has been collected for the 2008 report.

VAN-A15R\_ACO02A00: Sufficient excursions from the instantaneous *E. coli* bacteria criterion (10 of 36 samples – 27.8%) were recorded at DEQ's ambient water quality monitoring station (1aACO018.48) at the Route 846 (Woodburn Road) crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment. The segment was previously listed for a fecal coliform bacteria impairment, from 1998 through 2004. The *E. coli* bacteria impairment was first listed in 2004.

VAN-A15R\_ACO01A00: Sufficient excursions from the instantaneous *E. coli* bacteria criterion (2 of 14 samples – 14.3%) were recorded at DEQ's ambient water quality monitoring station (1aACO004.84) at the Route 611 (Telegraph Road) crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment. The segment was previously listed for a fecal coliform

bacteria impairment, from 2004 through 2006. The E. coli bacteria impairment was first listed in 2008.

Aquatic Life Use Impairment

VAN-A15R\_ACO01A00: Two biological monitoring events in 1006 at station 1aACO002.50 each resulted in a VSCI score which indicates an impaired macroinvertebrate community.

VAN-A15R\_ACO01A00: Two biological monitoring events in 1006 at station 1aACO006.10 each resulted in a VSCI score which indicates an impaired macroinvertebrate community.

The following Total Maximum Daily Load (TMDL) schedule has been established.

■ Accotink Creek Aquatic Life Use – 2010

The following Total Maximum Daily Loads (TMDLs) have been established.

- Accotink Creek Recreation Use (VAN-A15R ACO02A00) Approved by EPA 5-31-02
- Accotink Creek Recreation Use (VAN-A15R\_ACO01A00) Approved by EPA 12-18-08

Because the discharge from the facility is industrial in nature, it was not expected to discharge the contaminant of concern (*E. coli*). Therefore, it did not receive a WLA in either of the approved TMDLs, and is not expected to receive a WLA as a result of the aquatic life use TMDL development.

The complete planning statement is located within the permit reissuance file.

### b) Receiving Stream Water Quality Criteria

Part IX of 9 VAC 25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream, UT to Daniels Run, is located within Section 7 of the Potomac River Basin, and classified as a III water.

At all times, Class III waters must achieve a dissolved oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32°C, and maintain a pH of 6.0-9.0 standard units (S.U.).

Attachment 7 details other water quality criteria applicable to the receiving stream.

# Ammonia:

Ammonia is not a parameter of concern due to the fact the discharge is industrial in nature and there is no reasonable potential to exceed the ammonia criteria. Therefore, it is staff's best professional judgment that ammonia limits need not be developed for this discharge.

#### Metals Criteria:

The Water Quality Criteria for some metals are dependent on the receiving stream's hardness (expressed as mg/l calcium carbonate). The 7Q10 of the receiving stream is zero and there is no hardness data for this facility. Staff guidance suggests using a default hardness value of 50 mg/l CaCO<sub>3</sub> for streams east of the Blue Ridge. The hardness-dependent metals criteria in Attachment 7 are based on this default value.

# c) <u>Receiving Stream Special Standards</u>

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9 VAC 25-260-360, 370 and 380 designates the river basins, sections, classes, and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, UT to Daniels Run, is located within Section 7 of the Potomac River Basin. This section has been designated with a special standard of "b".

Special Standard "b" (Potomac Embayment Standards) established effluent standards for all sewage plants discharging into Potomac River embayments and for expansions of existing plants discharging into non-tidal tributaries of these embayments. 9 VAC 25-415, Policy for the Potomac Embayments controls point source discharges of conventional pollutants into the Virginia embayment waters of the Potomac River, and their tributaries, from the fall line at Chain Bridge in Arlington County to the Route 301 bridge in King George County. The regulation sets effluent limits for BOD<sub>5</sub>, total suspended solids, phosphorus, and ammonia, to protect the water quality of these high profile waterbodies. The Potomac Embayment Standards are not applied to this discharge since the discharge is industrial in nature and does not contain the pollutants of concern in appreciable amounts.

### d) Threatened or Endangered Species

The Virginia DGIF Fish and Wildlife Information System Database was searched on August 17, 2009, for records to determine if there are threatened or endangered species in the vicinity of the discharge. Threatened or endangered species were identified within a 2 mile radius of the discharge. The limits proposed in this draft permit are protective of the Virginia Water Quality Standards and therefore, protect the threatened and endangered species found near the discharge.

## **16.** Antidegradation (9 VAC 25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream, UT to Daniels Run, has been classified as Tier 1 based on the fact the UT is a dry ditch transporting storm water to Daniel Creek and eventually to Accotink Creek. Permit limits proposed have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

# 17. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development :

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points is equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLA) are calculated. In this case since the critical flows 7Q10 and 1Q10 have been determined to be zero, the WLA's are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency, and statistical characteristics of the effluent data.

### a) Effluent Screening:

Effluent data obtained from the permit application and Discharge Monitoring Reports (DMRs) has been reviewed and determined to be suitable for evaluation. Staff derived wasteload allocations where parameters are reasonably expected to be present in an effluent discharged (e.g., BTEX when the facility handles petroleum products) and where effluent data indicate the pollutant is present in the discharge above quantifiable levels. With regard to the discharge, total petroleum hydrocarbons, benzene, toluene, ethylbenzene, xylenes, and naphthalene are potential pollutants.

## b) Mixing Zones and Wasteload Allocations (WLAs):

Wasteload allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. With regard to the facility's discharge, total petroleum hydrocarbons, benzene, toluene, ethylbenzene, xylenes, and naphthalene are potential pollutants. Monitoring during the current permit term (2005 - 2009) demonstrated levels close to or less than detectable levels. The basic calculation for establishing a WLA is the steady state complete mix equation:

 $= \frac{C_{o} [Q_{e} + (f)(Q_{s})] - [(C_{s})(f)(Q_{s})]}{Q_{e}}$ WLA WLA = Wasteload allocation Where: = In-stream water quality criteria  $Q_{e}$ = Design flow  $Q_s$ = Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; harmonic mean for carcinogen-human health criteria; 30Q10 for ammonia criteria, and 30Q5 for non-carcinogen f = Decimal fraction of critical flow  $C_s$ = Mean background concentration of parameter in the receiving stream.

The water segment receiving the discharge via Outfall 001 is considered to have a 7Q10 and 1Q10 of 0.0 MGD. As such, there is no mixing zone and the WLA is equal to the  $C_o$ .

#### c) Effluent Limitations Toxic Pollutants

9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with WLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9 VAC 25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

### 1) Outfall 001

The following discussions on the development of BTEX and naphthalene limits are taken from Regulation 9 VAC 25-120-10 et seq., General Virginia Pollution Discharge Elimination System (VPDES) Permit Regulation for Discharges from Petroleum Contaminated Sites and Hydrostatic Tests.

#### **Benzene:**

The EPA criteria document for benzene (EPA 440/5-80-018, EPA 1980a) states that benzene may be acutely toxic to freshwater organisms at concentrations as low as 5,300  $\mu$ g/L. This is an LC50 value for rainbow trout. The document also states that acute toxicity would occur at lower concentrations among more sensitive species. No data were available concerning the chronic toxicity of benzene to sensitive freshwater organisms. The derivation of a "safe level" for benzene was based on the 5,300  $\mu$ g/L LC50. This value was divided by 10 in order to approximate a level which would not be expected to cause acute toxicity. (The use of an application factor of 10 was recommended by the National Academy of Sciences in the EPA's publication "Water Quality Criteria, 1972" (EPA/R3/73-033). This use of application factors when setting water quality criteria is still considered valid in situations where data are not sufficient to develop criteria according to more recent guidance.) The resulting "non-lethal" concentration of 530  $\mu$ g/L was divided by an assumed acute to chronic ratio of 10 to arrive at the water quality-based permit limitation of 53  $\mu$ g/L. When actual data are not available, EPA, in the Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) recommends using an

acute to chronic ratio of 10). The EPA model permit's technology-based 50  $\mu$ g/L value is more protective, therefore, it was chosen over the 53  $\mu$ g/L water quality-based concentration. An instantaneous maximum limit of 50  $\mu$ g/L is proposed with this reissuance. The semi-annual monitoring frequency (1/6M) for benzene shall be carried forward with this reissuance.

### **Ethylbenzene:**

The EPA criteria document for ethylbenzene (EPA 440/5-80-048, EPA 1980b) gives an acute effects concentration of 32,000  $\mu$ g/L. This is an LC50 for bluegill sunfish. Acute toxicity may occur at lower concentrations if more sensitive species were tested. No definitive data are available on the chronic toxicity of ethylbenzene to freshwater organisms. In order to derive an acceptable level of ethylbenzene for the protection of freshwater organisms the acute value of 32,000  $\mu$ g/L was divided by 100, using the same assumptions employed above for benzene. The resulting value of 320  $\mu$ g/L is a calculated chronic toxicity concentration for ethylbenzene. An instantaneous maximum limit of 320  $\mu$ g/L is proposed with this reissuance. The semi-annual monitoring frequency (1/6M) for ethylbenzene shall be carried forward with this reissuance.

#### Toluene:

The EPA criteria document for toluene (EPA 440/5-80-075, EPA 1980c) states that acute toxicity to freshwater organisms occurs at 17,500  $\mu$ g/L and would occur at lower concentrations if more sensitive organisms were tested. No data are available on the chronic toxicity of toluene to freshwater species. Based on the available data for acute toxicity and dividing by the application factor of 100, the proposed effluent limit for toluene discharged to freshwater is 175  $\mu$ g/L. An instantaneous maximum limit of 175  $\mu$ g/L is proposed with this reissuance. The semi-annual monitoring frequency (1/6M) for toluene shall be carried forward with this reissuance.

## **Xylene:**

Xylene is not a 307(a) priority pollutant, therefore no criteria document exists for this compound. There are three isomers of xylene (ortho, meta and para) and the general permit limits are established so that the sum of all xylenes is considered in evaluating compliance. The proposed effluent limits are based on a search of the EPA's ECOTOX data base. According to ECOTOX, the lowest freshwater LC50 for xylenes is 3,300  $\mu$ g/L reported for rainbow trout (Mayer and Ellersieck 1986). Based on the rationale presented earlier for other compounds, this acutely toxic concentration was divided by 10 to account for species that were not tested but which may be more sensitive than rainbow trout. Then, in order to find a concentration that is expected to be safe over chronic exposures, an additional safety factor of 10 was applied to arrive at the proposed effluent limitation of 33  $\mu$ g/L total xylenes. An instantaneous maximum limit of 33  $\mu$ g/L is proposed with this reissuance. The semi-annual monitoring frequency (1/6M) for xylene shall be carried forward with this reissuance.

# Naphthalene:

The EPA criteria document for naphthalene (EPA 440/5-80-059) gives a chronic effect concentration of 620  $\mu$ g/L with fathead minnows, but it states that effects would occur at lower concentrations if more sensitive freshwater organisms were tested. According to the ECOTOX DATABASE, naphthalene at a concentration of 1,000  $\mu$ g/L was lethal to 50% of the water fleas (Daphnia pulex) tested (Truco et al. 1983). DeGaere and associates (1982) tested the effects of naphthalene on Rainbow Trout and reported an LC50 concentration of 1600  $\mu$ g/l. Based upon these more recent studies, it is recommended that the effluent limit for naphthalene in freshwater be set at 10  $\mu$ g/L. An instantaneous maximum limit of 10  $\mu$ g/L is proposed with this reissuance. The semi-annual monitoring frequency (1/6M) for naphthalene shall be carried forward with this reissuance.

# **Methyl-Tert-Butyl-Ether (MTBE):**

The following discussion on the development of the MTBE limit is taken from Regulation 9 VAC 25-120-10 et seq., General Virginia Pollution Discharge Elimination System (VPDES) Permit Regulation for Discharges from Petroleum Contaminated Sites and Hydrostatic Tests.

Methyl-Tert-Butyl-Ether (MTBE) is a common additive in "reformulated" automotive gasolines. This oxygenate is supposed to reduce winter-time carbon monoxide levels in U.S. cities. It also is believed to be effective in reducing ozone and other toxics in the air year-round. If MTBE is used, it can be present in gasoline at up to 15% of the volume of the fuel. MTBE is an extremely hydrophilic compound. Unlike most petrole um products, it readily dissolves in water. The presence of MTBE in gasoline can increase the solubility of the fuel mixture in groundwater. MTBE may be removed from contaminated groundwater by air stripping treatment technologies. However, due to its hydrophilic nature, a higher air/water ratio is required to remove this constituent via air stripping than is required for BTEX removal. According to the EPA Treatability Database (RREL Version 5.0), MTBE removal efficiency via air stripping ranges from approximately 63 percent to 79 percent. If the MTBE concentration is the system influent is 10 mg/L and removal efficiency of 75% is achieved, air stripping should be capable of reducing the MTBE concentration to 2.5 ug/L.

Neither EPA nor the DEQ has established water quality criteria for MTBE for protection of aquatic life or human health. Literature searches indicated several studies that evaluated the effects of MTBE on aquatic organisms. According to BenKinney *et al.* (1994), MTBE was acutely toxic (LC50) to green algae (*Selanastrum capricornutum*) at a concentration of 184,000 ug/L. Geiger and associates (1988) found that MTBE was acutely toxic to the fathead minnow (*Pimephales promelas*) at a concentration of 672 mg/L (672,000 ug/L). Application of the customary safety factor of 100 to the LC50 concentration for green algae results in a concentration of 1,840 ug/L. This concentration is recommended as the discharge limit for MTBE into freshwater.

This parameter was monitored on a semiannual basis during the current permit term (2005 – 2009). Values ranged from a low of 38.2 ug/L in September 2007 to a high of 330 ug/L in February 2005. Semiannual monitoring with a limit of 1,840 ug/L shall be carried forward with this reissuance.

#### **Total Cyanide:**

This monitoring was initially imposed because of a limit analysis done for the 1999 reissuance. The limit analysis demonstrated the need for a limit when both acute and chronic impacts are considered, but not when only acute impacts are considered. Staff determined that cyanide was most likely a result of storm water inputs into the pond, and since storm water inputs are short term (acute) in nature, monitoring only was required to determine whether or not there are long term (chronic) cyanide inputs from the treatment units and oil-water separators. During the permit cycle ending in 2004, total cyanide was monitored at Outfall 001 on a semiannual basis. All results were less than the detection limit. With the previous reissuance, monitoring frequency was reduced to annually. All results were again less than the detection limit.

It is staff's best professional judgment that annual monitoring for total cyanide be discontinued for Outfall 001 with this reissuance. However, the facility shall continue to utilize Best Management Practices as part of the SWP3 to ensure that there is no contamination of storm water runoff impacting State waters from cyanide at the facility.

#### **Pesticides:**

Since limits for pesticides are not routinely placed in permits for storm water discharges, the facility is required to utilize Best Management Practices as part of the SWP3 to ensure that there is no contamination of storm water runoff that impacts State waters from the use of pesticides at the facility. Pesticides will continue to be monitored as part of the water quality criteria monitoring in the reissued permit.

### 2) Internal Outfall 106 – Hydrostatic Test Waters

#### **BTEX** and Naphthalene:

Hydrostatic testing is conducted on the aboveground storage tanks, pipelines, and tanker trucks after major repairs as required by DEQ regulation VR 680-14-13 Aboveground Storage Tank Pollution Prevention Requirements. A review of DMR data from January 2005 – May 2009 indicates that no hydrostatic testing took place.

Due to the potential volume of the hydrostatic test waters, it is staff's best professional judgment that the monitoring frequency for a standard hydrostatic test remain two sampling events per test. The first is to be representative of the test waters collected during the initial discharge or a representative sample collected and analyzed prior to discharge. The second sample is to be collected and representative of the final 20% or the last two feet of water contained in the tank, tanker truck, or pipeline. The discharge limitations for BTEX and naphthalene for gasoline contamination and petroleum products other than gasoline are the same as outlined in the above section (Outfall 001).

#### **Total Residual Chlorine:**

Total Residual Chlorine limits are to be considered for Internal Outfall 106. Potable water from the local municipality is utilized for hydrostatic testing. Potable water contains measurable amounts of chlorine (1.0-3.0 mg/L). TRC limitations are established to prevent impacts (acute and chronic) to aquatic organisms. The TRC limitation is only applicable if the water used in the test has been chlorinated. An instantaneous maximum limit of 0.016 mg/L is proposed based on the chronic aquatic life criterion in Virginia's water quality standards and the WLA derivation in Attachment 7.

### d) Effluent Limitations and Monitoring – Conventional and Non-Conventional Pollutants

# 1) Outfall 001

### **Total Petroleum Hydrocarbons (TPH):**

The TPH daily maximum limit of 15 mg/L shall be carried forward with this permit reissuance. The limit is based on the ability of simple oil-water separator technology to recover free product from water. Wastewater discharged without a visible sheen is generally expected to meet this effluent limitation. A review of DMR data from 2005 - 2009 indicates that the facility is consistently below the permit limit. The monthly monitoring frequency (1/M) for TPH shall be carried forward with this reissuance.

### **Total Suspended Solids (TSS):**

The TSS daily maximum limit of 60 mg/L shall be carried forward with this permit reissuance. The limit is included with the permit to ensure proper operation and maintenance of the storm water detention pond. The limit was derived from requirements at other industrial activities providing sedimentation of storm water runoff. A review of DMR data from 2005 - 2009 indicates that the facility is consistently below the permit limit. The monthly monitoring frequency (1/M) for TPH shall be carried forward with this reissuance.

#### nH:

pH limitations are set at the water quality criteria. A review of DMR data from 2005 - 2009 indicates that the facility is consistently below the permit limit. The monthly monitoring frequency (1/M) for pH shall be carried forward with this reissuance.

# 2) Outfall 101

## **Total Petroleum Hydrocarbons (TPH):**

The TPH instantaneous maximum limit of 15 mg/L shall be carried forward with this permit reissuance. The limit is based on the ability of simple oil-water separator technology to recover free product from water. Wastewater discharged without a visible sheen is generally expected to meet this effluent limitation. A review of DMR data from 2005 - 2009 indicates that the facility is consistently below the permit limit. The quarterly monitoring frequency (1/3M) for TPH shall be carried forward with this reissuance.

#### 3) Outfall 102

#### **Total Petroleum Hydrocarbons (TPH):**

The TPH instantaneous maximum limit of 15 mg/L shall be carried forward with this permit reissuance. The limit is based on the ability of simple oil-water separator technology to recover free product from water. Wastewater discharged without a visible sheen is generally expected to meet this effluent limitation. A review of DMR data from 2005 – 2009 indicates that the facility is consistently below the permit limit. The quarterly monitoring frequency (1/3M) for TPH shall be carried forward with this reissuance.

#### 4) Outfall 103

#### **Total Petroleum Hydrocarbons (TPH):**

The TPH monthly average limit of 30 mg/L shall be carried forward with this permit reissuance. The limit is based on the ability of simple oil-water separator technology to recover free product from water. Wastewater discharged without a visible sheen is generally expected to meet this effluent limitation. A review of DMR data from 2005 - 2009 indicates that the facility is consistently below the permit limit. The monitoring frequency of once per discharge (1/DIS) for TPH shall be carried forward with this reissuance.

### 6) Outfall 106

### **Total Petroleum Hydrocarbons (TPH):**

The TPH instantaneous maximum limit of 15 mg/L shall be carried forward with this permit reissuance. The limit is based on the ability of simple oil-water separator technology to recover free product from water. Wastewater discharged without a visible sheen is generally expected to meet this effluent limitation. A review of DMR data from 2005 – 2009 indicates that there was no discharge from this outfall after May 2004. The contingent monitoring frequency (2/DIS) for TPH shall be carried forward with this reissuance.

# **Total Suspended Solids (TSS):**

Monitoring for TSS shall be carried forward with this permit reissuance to ensure that the effluent is not contaminated with excessive amounts of solids. If significant concentrations of suspended solids are detected, the permit may be modified at a later time to include a limit.

A review of DMR data from 2005 – 2009 indicates that there was no discharge from this outfall after May 2004. The contingent monitoring frequency (2/DIS) for TSS shall be carried forward with this reissuance.

#### pH:

pH limitations are set at the water quality criteria. A review of DMR data from 2005 – 2009 indicates that there was no discharge from this outfall after May 2004. The contingent monitoring frequency (2/DIS) for pH shall be carried forward with this reissuance.

#### **Total Organic Carbon (TOC):**

Monitoring for TOC shall be carried forward with this permit reissuance to ensure that the effluent is not contaminated with non-petroleum organic substances. It is believed that TOC concentrations in this type of effluent are low. If sampling indicates high levels of TOC, the permit may be modified at a later time to include a TOC limit. A review of DMR data from 2005 – 2009 indicates that there was no discharge from this

outfall after May 2004. The contingent monitoring frequency (2/DIS) for TOC shall be carried forward with this reissuance.

# 7) Outfall 901

## **Total Petroleum Hydrocarbons (TPH):**

The TPH monthly average limit of 30 mg/L shall be carried forward with this permit reissuance. A review of DMR data from 2005 – 2009 indicates that the facility is consistently below the permit limit. The quarterly monitoring frequency (1/3M) for TPH shall be carried forward with this reissuance.

# **Total Suspended Solids (TSS):**

The TSS daily maximum limit of 60 mg/L shall be carried forward with this permit reissuance. The limit is included with the permit to ensure proper operation and maintenance of the storm water detention pond. The limit was derived from requirements at other industrial activities providing sedimentation of storm water runoff. A review of DMR data from 2005 - 2009 indicates that the facility is consistently below the permit limit. The quarterly monitoring frequency (1/3M) for TSS shall be carried forward with this reissuance.

#### pH:

pH limitations are set at the water quality criteria. A review of DMR data from 2005 - 2009 indicates that the facility is consistently below the permit limit. The quarterly monitoring frequency (1/3M) for pH shall be carried forward with this reissuance.

# e) <u>Effluent Limitations and Monitoring Summary.</u>

The effluent limitations are presented in the following table. Limits were established for Total Suspended Solids, pH, Total Residual Chlorine, Total Petroleum Hydrocarbons, BTEX, MTBE, and Naphthalene.

The limits for BTEX, MTBE, and Naphthalene are in accordance with 9 VAC 25-120, General VPDES Permit for Discharges from Petroleum Contaminated Sites.

The limits for Total Suspended Solids are based on Best Professional Judgement.

Sample Type and Frequency are in accordance with the recommendations in the VPDES Permit Manual.

### 18. Antibacksliding:

The backsliding proposed with this reissuance conforms to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, 9 VAC 25-31-220.L., and 40 § CFR 122.44. Per 9 VAC 25-120, General VPDES Permit for Discharges from Petroleum Contaminated Sites, MTBE limits are not required for hydrostatic test waters. As such, the MTBE limit of 1840 µg/L for Outfall 106 (hydrostatic test waters) has been removed from the permit. Additionally, hydrostatic testing has not occurred since 2004.

### 19a. Effluent Limitations/Monitoring Requirements: Outfall 001

Maximum flow of this industrial facility: 0.22 MGD.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	LIMITS	Monthly Average	Daily Maximum	<u>Minimum</u>	<u>Maximum</u>	<u>Frequency</u>	Sample Type
Flow (MGD)	N/A	NL	N/A	N/A	NL	1/M	EST
pH (S.U.)	3	N/A	N/A	6.0 S.U.	9.0 S.U.	1/M	Grab
Total Suspended Solids	2	N/A	N/A	N/A	60 mg/L	1/M	Grab
Total Petroleum Hydrocarbons*	2	N/A	N/A	N/A	15 mg/L	1/M	Grab
Benzene	2	N/A	N/A	N/A	50 μg/L	1/6M**	Grab
Ethylbenzene	2	N/A	N/A	N/A	320 μg/L	1/6M**	Grab
Toluene	2	N/A	N/A	N/A	175 µg/L	1/6M**	Grab
Total Xylenes	2	N/A	N/A	N/A	33 μg/L	1/6M**	Grab
Naphthalene	2	N/A	N/A	N/A	10 μg/L	1/6M**	Grab
MTBE	2	N/A	N/A	N/A	1840 μg/L	1/6M**	Grab
Chronic Toxicity – C. dubia (TU <sub>c</sub> )	2	NA	NL	NA	NA	1/YR	24H-C
Chronic Toxicity – P. promelas (TU <sub>c</sub> )	) 2	NA	NL	NA	NA	1/YR	24H-C

The basis for the limitations codes are: MGD = Million gallons per day. 1/M = Once every month.

1. Federal Effluent Requirements N/A = Not applicable. 1/6M = Once every six months.

2. Best Professional Judgement NL = No limit; monitor and report. 1/YR = Once every year.

3. Water Quality Standards S.U. = Standard units.

24H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of twenty-four (24) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of twenty-four (24) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

EST = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

\*Total Petroleum Hydrocarbons (TPH) shall be analyzed using the Wisconsin Department of Natural Resources Modified Diesel Range Organics Method as specified in Wisconsin publication SW-141 (1995), or by EPA SW-846 Method 8015C for diesel range organics, or by EPA SW-846 Method 8270D. If Method 8270D is used, the lab must report the combination of diesel range organics and polynuclear aromatic hydrocarbons.

\*\*The semi-annual monitoring periods shall be January 1 - June 30, and July 1 - December 31. The DMR shall be submitted no later than the 10<sup>th</sup> day of the month following the monitoring period (July 10, and January 10, respectively).

### 19b. Effluent Limitations/Monitoring Requirements: Outfall 101 (BP Oil-Water Separator)

Maximum Flow of this Industrial Facility: 0.040 MGD.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS		MONITORING REQUIREMENTS				
		Monthly Average	Daily Maximum	<u>Minimum</u>	<u>Maximum</u>	Frequency	Sample Type
Flow (MGD)	N/A	NL	N/A	N/A	NL	1/3M**	EST
Total Petroleum Hydrocarbons*	2	N/A	N/A	N/A	15 mg/L	1/3M**	Grab

The basis for the limitations codes are: MGD = Million gallons per day. 13/M = Once every three months.

1. Federal Effluent Requirements N/A = Not applicable.

2. Best Professional Judgement NL = No limit; monitor and report.

3. Water Quality Standards

EST = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

\*Total Petroleum Hydrocarbons (TPH) shall be analyzed using the Wisconsin Department of Natural Resources Modified Diesel Range Organics Method as specified in Wisconsin publication SW-141 (1995), or by EPA SW-846 Method 8015C for diesel range organics, or by EPA SW-846 Method 8270D. If Method 8270D is used, the lab must report the combination of diesel range organics and polynuclear aromatic hydrocarbons.

\*\*The quarterly monitoring periods shall be January 1 - March 31, April 1 - June 30, July 1 - September 30 and October 1 - December 31. The DMR shall be submitted no later than the 10<sup>th</sup> day of the month following the monitoring period (April 10, July 10, October 10 and January 10, respectively).

# 19c. Effluent Limitations/Monitoring Requirements: Outfall 102 (TransMontaigne Oil-Water Separator)

Maximum Flow of this Industrial Facility: 0.040 MGD.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS		DISCHARGE LIM	MONITORING REQUIREMENTS			
		Monthly Average	<u>Daily Maximum</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Frequency</u>	Sample Type
Flow (MGD)	N/A	NL	N/A	N/A	NL	1/3M**	EST
Total Petroleum Hydrocarbons*	2	N/A	N/A	N/A	15 mg/L	1/3M**	Grab

The basis for the limitations codes are: MGD = Million gallons per day. 13/M = Once every three months.

1. Federal Effluent Requirements N/A = Not applicable.

2. Best Professional Judgement NL = No limit; monitor and report.

3. Water Quality Standards

EST = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

\*Total Petroleum Hydrocarbons (TPH) shall be analyzed using the Wisconsin Department of Natural Resources Modified Diesel Range Organics Method as specified in Wisconsin publication SW-141 (1995), or by EPA SW-846 Method 8015C for diesel range organics, or by EPA SW-846 Method 8270D. If Method 8270D is used, the lab must report the combination of diesel range organics and polynuclear aromatic hydrocarbons.

\*\*The quarterly monitoring periods shall be January 1 - March 31, April 1 - June 30, July 1 - September 30 and October 1 - December 31. The DMR shall be submitted no later than the 10<sup>th</sup> day of the month following the monitoring period (April 10, July 10, October 10 and January 10, respectively).

# 19d. Effluent Limitations/Monitoring Requirements: Outfall 103 (TransMontaigne Oil-Water Separator Bypass)

Maximum Flow of this Industrial Facility: Varies

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS		DISCHARGE LIM	MONITORING REQUIREMENTS			
		Monthly Average	Daily Maximum	<u>Minimum</u>	<u>Maximum</u>	Frequency	Sample Type
Flow (MGD)	N/A	NL	N/A	N/A	NL	1/DIS	EST
Total Petroleum Hydrocarbons* 2		N/A	N/A	N/A	30 mg/L	1/DIS	Grab

The basis for the limitations codes are: MGD = Million gallons per day. I/DIS = Once per discharge.

1. Federal Effluent Requirements N/A = Not applicable.

2. Best Professional Judgement NL = No limit; monitor and report.

3. Water Quality Standards

EST = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

\*Total Petroleum Hydrocarbons (TPH) shall be analyzed using the Wisconsin Department of Natural Resources Modified Diesel Range Organics Method as specified in Wisconsin publication SW-141 (1995), or by EPA SW-846 Method 8015C for diesel range organics, or by EPA SW-846 Method 8270D. If Method 8270D is used, the lab must report the combination of diesel range organics and polynuclear aromatic hydrocarbons.

### 19e. Effluent Limitations/Monitoring Requirements: Outfall 106 (Hydrostatic Test Waters)

Maximum flow of this industrial facility: Dependent of tank tested.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR	DISCHARGE LIMITATIONS				MONITORING REOUIREMENTS	
	LIMITS	Monthly Average	Daily Maximum	<u>Minimum</u>	<u>Maximum</u>	<u>Frequency</u>	Sample Type
Flow (MGD)	N/A	NL	N/A	N/A	NL	2/DIS*	EST
pH (S.U.)	3	N/A	N/A	6.0	9.0	2/DIS*	Grab
Total Residual Chlorine	3	N/A	N/A	N/A	0.016 mg/L	2/DIS*	Grab
Total Suspended Solids	2	NL	N/A	N/A	N/A	2/DIS*	Grab
Total Petroleum Hydrocarbons**	2	N/A	N/A	N/A	15 mg/L	2/DIS*	Grab
Total Organic Carbon	2	NL	N/A	N/A	N/A	2/DIS*	Grab
Benzene	2	N/A	N/A	N/A	50 μg/L	2/DIS*	Grab
Ethylbenzene	2	N/A	N/A	N/A	$320~\mu g/L$	2/DIS*	Grab
Toluene	2	N/A	N/A	N/A	175 μg/L	2/DIS*	Grab
Total Xylenes	2	N/A	N/A	N/A	$33  \mu g/L$	2/DIS*	Grab
Naphthalene***	2	N/A	N/A	N/A	10 μg/L	2/DIS*	Grab

The basis for the limitations codes are:

MGD = Million gallons per day.

2/DIS = Two samples per tank tested.

1. Federal Effluent Requirements

N/A = Not applicable.

2. Best Professional Judgement

NL = No limit; monitor and report.

Water Quality Standards

S.U. = Standard units.

EST = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

\* 2/DIS – Two samples per tank tested. The first sample shall be collected during the initial discharge or be a representative sample collected and analyzed prior to discharge. The second sample shall be collected during the discharge of the final 20% by volume or the last two feet of hydrostatic tank test water. Samples shall be collected from the discharge point at the appropriate above ground storage tanks.

\*\*Total Petroleum Hydrocarbons (TPH) shall be analyzed using the Wisconsin Department of Natural Resources Modified Diesel Range Organics Method as specified in Wisconsin publication SW-141 (1995), or by EPA SW-846 Method 8015C for diesel range organics, or by EPA SW-846 Method 8270D. If Method 8270D is used, the lab must report the combination of diesel range organics and polynuclear aromatic hydrocarbons.

\*\*\* Monitoring for Naphthalene is only required when hydrostatic testing occurs on tanks containing aviation gasoline, jet fuel, or diesel.

# 19f. Effluent Limitations/Monitoring Requirements: Outfall 901 (Storm Water)

Maximum Flow of this Industrial Facility: 0.40 MGD

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Daily Maximum	<u>Minimum</u>	<u>Maximum</u>	<u>Frequency</u>	Sample Type
Flow (MGD)	N/A	NL	N/A	N/A	NL	1/3M**	EST
pН	2	N/A	N/A	6.0 S.U.	9.0 S.U.	1/3M**	Grab
Total Suspended Solids	2	N/A	N/A	N/A	60 mg/L	1/3M**	Grab
Total Petroleum Hydrocarbons*	2	N/A	N/A	N/A	30 mg/L	1/3M**	Grab

The basis for the limitations codes are:

MGD = Million gallons per day.

1/3M = Once every three months.

1. Federal Effluent Requirements

N/A = Not applicable.

2. Best Professional Judgement

NL = No limit; monitor and report.

3. Water Quality Standards

EST = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

\*Total Petroleum Hydrocarbons (TPH) shall be analyzed using the Wisconsin Department of Natural Resources Modified Diesel Range Organics Method as specified in Wisconsin publication SW-141 (1995), or by EPA SW-846 Method 8015C for diesel range organics, or by EPA SW-846 Method 8270D. If Method 8270D is used, the lab must report the combination of diesel range organics and polynuclear aromatic hydrocarbons.

\*\*The quarterly monitoring periods shall be January 1 - March 31, April 1 - June 30, July 1 - September 30 and October 1 - December 31. The DMR shall be submitted no later than the 10<sup>th</sup> day of the month following the monitoring period (April 10, July 10, October 10 and January 10, respectively).

### 20. Other Permit Requirements:

a) Part I.B. of the permit contains quantification levels and compliance reporting instructions.

9 VAC 25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

b) Permit Section Part I.C. details the requirements for Toxics Management Program.

The VPDES Permit Regulation at 9 VAC 25-31-210 requires monitoring and 9 VAC 25-31-220.I, requires limitations in the permit to provide for and assure compliance with all applicable requirements of the State Water Control Law and the Clean Water Act. A TMP is imposed for municipal facilities with a design rate >1.0 MGD, with an approved pretreatment program or required to develop a pretreatment program, or those determined by the Board based on effluent variability, compliance history, IWC, and receiving stream characteristics.

The Fairfax Terminal – Joint Basin Corporation is an industrial discharger with an effluent that may be potentially toxic. The current TMP for this facility consists of an annual acute toxicity test using one test species (*C. dubia*) and an annual chronic toxicity test using two test species (*C. dubia and P. promelas*). Monitoring is to coincide with the annual testing of the fire suppression systems.

With this reissuance, sampling shall be conducted in response to a rainwater discharge event. It is staff's best professional judgement that samples collected in response to a rain event are more representative of the facility's actual discharge. If at all possible, sampling is to be conducted within the first three hours following the initiation of a rain water discharge event.

The existing permit requirement for an annual acute toxicity test using one test species (*C. dubia*) has been removed with this reissuance. Because the discharge from the facility is not intermittent in nature, chronic toxicity testing is most appropriate. As such, annual chronic toxicity test using two test species (*C. dubia and P. promelas*) shall be carried forward.

c) Permit Section Part I.D details the requirements of a Storm Water Management Plan.
9 VAC 25-31-10 defines discharges of storm water from municipal treatment plants with design flow of 1.0 MGD or more, or plants with approved pretreatment programs, as discharges of storm water associated with industrial activity. 9 VAC 25-31-120 requires a permit for these discharges. The pollution Prevention Plan requirements are derived from the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq.

#### 21. Other Special Conditions:

- a) O&M Manual Requirement. Required by Code of Virginia §62.1-44.19; VPDES Permit Regulation, 9 VAC 25-31-190.E. The permittee shall review the existing Operations and Maintenance (O&M) Manual and notify the DEQ Northern Regional Office, in writing, whether it is still accurate and complete by March 28, 2010. If the O&M Manual is no longer accurate and complete, a revised O&M Manual shall be submitted for approval to the DEQ Northern Regional Office by March 28, 2010. Future changes to the facility must be addressed by the submittal of a revised O&M Manual within 90 days of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.
- b) <u>Water Quality Criteria Reopener.</u> The VPDES Permit Regulation at 9 VAC 25-31-220 D. requires establishment of effluent limitations to ensure attainment/maintenance of receiving stream water quality criteria. Should data collected and submitted for Attachment A of the permit, indicate the need for limits to ensure protection of water quality criteria, the permit may be modified or alternately revoked and reissued to impose such water quality-based limitations.

- water Quality Criteria Monitoring. State Water Control Law §62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters. States are required to review data on discharges to identify actual or potential toxicity problems, or the attainment of water quality goals, according to 40 CFR Part 131, Water Quality Standards, subpart 131.11. To ensure that water quality criteria are maintained, the permittee is required to analyze the facility's effluent for the substances noted in Attachment A of this VPDES permit.
- d) <u>Notification Levels</u>. The permittee shall notify the Department as soon as they know or have reason to believe:
  - a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
    - (1) One hundred micrograms per liter;
  - (2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony;
    - (3) Five times the maximum concentration value reported for that pollutant in the permit application; or
    - (4) The level established by the Board.
  - b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
    - (1) Five hundred micrograms per liter;
    - (2) One milligram per liter for antimony;
  - (3) Ten times the maximum concentration value reported for that pollutant in the permit application; or
    - (4) The level established by the Board.
- e) Oil Storage Ground Water Monitoring Reopener. Facilities with greater than 1,000,000 gallons of regulated aboveground petroleum storage are required to monitor ground water under the Facility and Aboveground Storage Tank Regulation. Where potential exists for ground water pollution and that regulation does not require monitoring, the VPDES permit may under Cod of Virginia § 62.1-44.21. OR As this facility currently manages ground water in accordance with 9 VAC 25-90-10 et seq., Oil Discharge Contingency Plans and Administration Fees for Approval, this permit does not presently impose ground water monitoring requirements. However, this permit may be modified or alternately revoked and reissued to include ground water monitoring not required by the ODCP regulation.
- f) <u>Materials Handling/Storage</u>. 9 VAC 25-31-50 A prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorize the Board to regulate the discharge of industrial waste or other waste.
- g) <u>Hydrostatic Testing.</u> The permittee shall obtain approval from the DEQ Northern Regional Office forty-eight (48) hours in advance of any discharge resulting from hydrostatic testing. The conditions of approval will be contingent on the volume and duration of the proposed discharge, and the nature of the residual product.
- h) <u>No Discharge of Detergents, Surfactants, or Solvents to the Oil/Water Separators.</u> This special condition is necessary to ensure that the oil/water separators' performance is not impacted by compounds designed to emulsify oil. Detergents, surfactants, and some other solvents will prohibit oil recovery by physical means.

<u>Permit Section Part II.</u> Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

#### 23. Changes to the Permit from the Previously Issued Permit:

a) Special Conditions: No changes.

# b) Monitoring and Effluent Limitations:

- 1) Outfall 104, associated with the TransMontaigne groundwater treatment system, was removed from the permit at the request of the facility as there are no active remediation projects. As such, all associated monitoring requirements were removed.
- 2) The limit for Benzene was reduced to  $50 \,\mu\text{g/L}$  in accordance with 9 VAC 25-120, General VPDES Permit for Discharges from Petroleum Contaminated Sites.
- 3) The limit for Ethylbenzene was reduced to 320 µg/L in accordance with 9 VAC 25-120, General VPDES Permit for Discharges from Petroleum Contaminated Sites.
- 4) The limit for Toluene was reduced to  $175 \mu g/L$  in accordance with 9 VAC 25-120, General VPDES Permit for Discharges from Petroleum Contaminated Sites.
- 5) The limit for Total Xylene was reduced to 33 µg/L in accordance with 9 VAC 25-120, General VPDES Permit for Discharges from Petroleum Contaminated Sites.
- 6) The limit for Naphthalene was reduced to  $10 \,\mu\text{g/L}$  in accordance with 9 VAC 25-120, General VPDES Permit for Discharges from Petroleum Contaminated Sites.
- 7) Annual monitoring for total cyanide has been removed from the permit based on the compliance history of the facility.
- 8) Permit and fact sheet language pertaining to MTBE monitoring was clarified for Outfall 106. The previous permit established a MTBE limit of 1840 µg/L with no discussion or rationale provided within the fact sheet. With this reissuance it is staff's best professional judgement that this limit be removed in accordance with 9 VAC 25-120, General VPDES Permit for Discharges from Petroleum Contaminated Sites.
- 9) The facility's TMP requirements have changed from samples being collected during the annual testing of the fire suppression systems to samples being collected following the initiation of a rainwater discharge event.
- 10) The requirement for annual acute toxicity testing has been removed with this reissuance. Because the discharge from the facility is not intermittent in nature, chronic toxicity testing rather than acute toxicity testing is most appropriate.

### 24. Variances/Alternate Limits or Conditions:

N/A

### 25. Public Notice Information:

First Public Notice Date: November 20, 2009 Second Public Notice Date: November 27, 2009

Public Notice Information is required by 9 VAC 25-31-280 B. All pertinent information is on file and may be inspected, and copied by contacting the: DEQ Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193, Telephone No. (703) 583-3853, susan. mackert@deq.virginia.gov. See Attachment 8 for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

### 26. 303 (d) Listed Stream Segments and Total Max. Daily Loads (TMDL):

The receiving stream is not listed on the current 303(d) list. However, the 2008 Virginia Water Quality Assessment 305(b)/303(d) Integrated Report (IR) lists numerous downstream impairments for both the free-flowing portion of Accotink Creek and the tidal portions of Accotink Creek and Pohick Bay. A Total Maximum Daily Load (TMDL) for the Accotink Creek recreation use impairment (*E. coli*) for segment VAN-A15R\_ACO02A00 was approved by the U.S. EPA on May 31, 2002. A Total Maximum Daily Load (TMDL) for the Accotink Creek recreation use impairment (*E. coli*) for segment VAN-A15R\_ACO01A00 was approved by the U.S. EPA on December 18, 2008. Because the discharge from the facility is industrial in nature, it was not expected to discharge the contaminant of concern (*E. coli*). Therefore, it did not receive a WLA in either of the approved TMDLs.

<u>TMDL Reopener:</u> This special condition is to allow the permit to reopened if necessary to bring it in compliance with any applicable TMDL that may be developed and approved for the receiving stream.

#### 27. Additional Comments:

Previous Board Action(s): N/A

Staff Comments: N/A

Public Comment: No comments were received during the public notice.

EPA Checklist: The checklist can be found in Attachment 9.

FIGURE 1-2. EXTERNAL AND INTERNAL STORM WATER OUTFALL LOCATIONS, FAIRFAX TERMINAL COMPLEX, FAIRFAX, VIRGINIA

Attachment 1

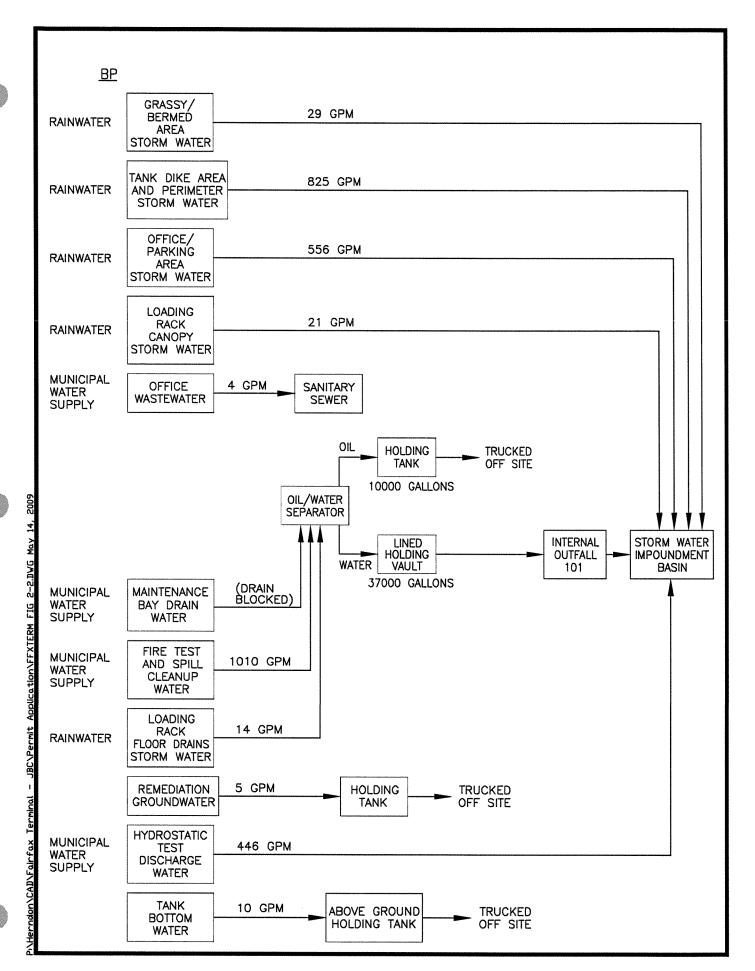


FIGURE 3-3. SURFACE WATER MANAGEMENT, BP TERMINAL, FAIRFAX, VIRGINIA

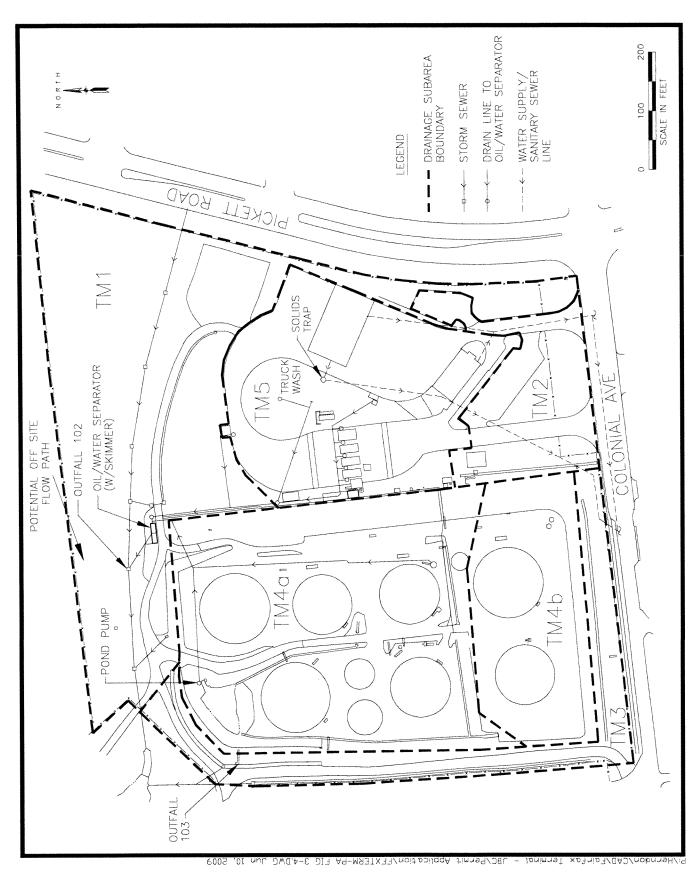


FIGURE 2-4. CITGO SCHEMATIC DIAGRAM
Attachment 1

FIGURE 3-5. SURFACE WATER MANAGEMENT, CITGO TERMINAL, FAIRFAX, VIRGINIA

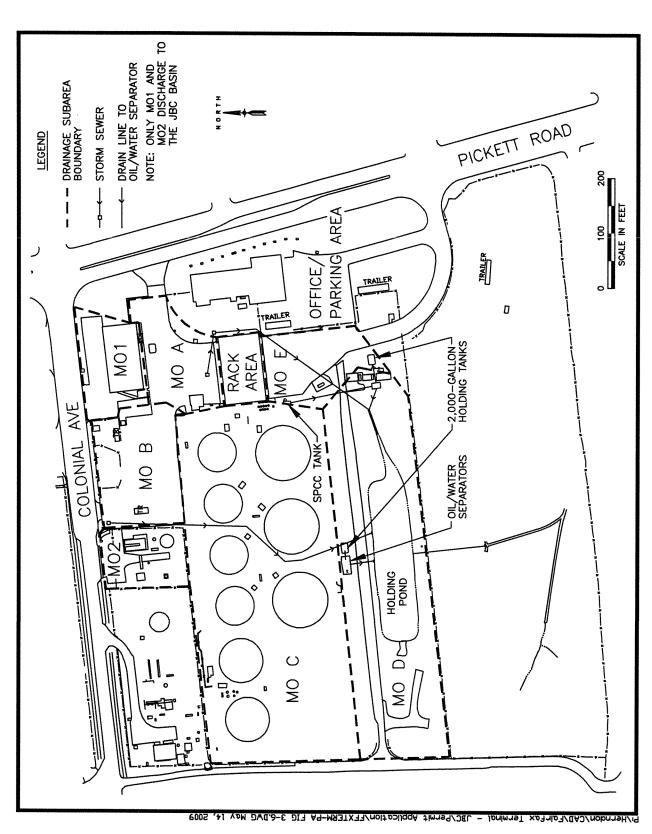


FIGURE 3-6. SURFACE WATER MANAGEMENT, MOTIVA TERMINAL, FAIRFAX, VIRGINIA

Table 2-1
Intermittent Flows to the JBC Basin

Outfall Number	Operations Contributing Flow	Frequency	Flow Rate (gpm)	Duration (hours)						
001	BP									
	Maintenance Bay Drain Water	drain blocked	0	0.0						
	Hydrostatic Test Discharge Water	approximately once every five years	446	168						
	TransMontaigne									
	Hydrostatic Test Discharge Water	Approximately once every four years	208	240						
	CITGO									
	Hydrostatic Test Discharge Water	Could be as frequent as annually	347	240						
	MOTIVA	***************************************	•							
	Hydrostatic Test Discharge Water	One every ten years	125	240						

## 3.0 DISCHARGES TO BASIN AND OUTFALLS

This section discusses sources of water discharged to the Fairfax Terminal Storm Water Impoundment Basin (Basin). Information obtained from topographic maps, City of Fairfax utility maps, water management practices for each terminal facility, and visual observation was used to define the area draining to the Basin.

# 3.1 Sources of Water to Storm Water Impoundment Basin

Sources of water flowing into the Basin have been divided into two major groups: sources associated with the Fairfax Terminal Complex (the Terminal sources) and sources associated with off-site areas (Non-Terminal sources). Figure 3-1 shows the total drainage area for the Basin including both the Terminal and Non-Terminal source areas. Figure 3-2 shows the drainage subareas defined by unique drainage flow paths within the overall drainage area.

#### 3.1.1 Terminal Sources

Surface water flowing to the Basin from the Terminal Complex area comes from each of the four Fairfax Terminal bulk storage facilities, from Colonial Avenue, and from the Basin area itself. Surface Water management activities at each of the four facilities are described in detail in Section 3-2. Figure 3-2 shows the sub-areas of drainage at each facility: BP, BP1-3; TransMontaigne, TM1-5; CITGO, CI1-6; and MOTIVA, MO1 and 2. Runoff from Colonial Avenue itself (CA) flows into the Basin after passing through culverts along Colonial Avenue and through the western portion of the CITGO property. Storm water runoff from the area immediately around the Basin (BA), and rainwater falling directly into the Basin also contribute water to the Basin.

# 3.1.2 Non-Terminal Sources

Water from three separate Non-Terminal areas flows into the Basin: a golf course located north of the Complex (OFF7), Pickett Road and a commercial area located east of the Complex (PR), and a residential area located south and west of the Complex (OFF1-6).







A section of the golf course located north of the TransMontaigne terminal (OFF7) contributes storm water runoff overland directly to the Basin. Storm water runoff from several commercial businesses located east of Pickett Road and runoff from a portion of Pickett Road itself (PR) flows into the Basin through a storm sewer pipeline that runs across the northern part of the TransMontaigne property.

The remaining Non-Terminal area that contributes storm water runoff to the Basin is a residential area located south and west of the Complex. The residential area, which was divided into six drainage sub-areas (OFF1-6) based on topographic flow paths, includes portions of three separate residential developments. Drainage from two small areas at the Comstock residential complex, a group of townhouses located south of the BP terminal (OFF5 and 6), drain into a single pipe and then flow into a storm water staging area on the BP property. A much larger area of Comstock and part of the Lyndhurst condominiums, located west of BP (OFF4) drain through a pipe under BP's staging area into a concrete-lined channel that crosses BP and CITGO property and discharges directly to the Basin. Another part of Lyndhurst (OFF3) also drains to the Basin, flowing overland to the concrete-lined channel on CITGO's property. Finally, storm water from a small part of Little River Hills (OFF1-2), a development of single family homes located to the west of the Complex, drains into the Basin after flowing overland to the concrete-lined channel, or to a separate channel located along the western boundary of the Basin area.

# 3.2 Surface Water Management by Facility

Information regarding surface water management was supplied by each of the four Fairfax Terminal facilities and is summarized below.

### 3.2.1 BP

BP owns approximately 19.7 acres in the southwest quadrant of the Terminal Complex. As shown on Figure 3-3, there are three surface water drainage sub-areas at the BP facility, that contribute water to the Basin including: the tank dike field area located in the



eastern and southern portions of the site (drainage area BP1 on Figure 3-3); the office parking area (BP2); and the grassy bermed area located between the office and the tank dike area (BP3). In addition to surface water run off, some other water generated by specific activities at the site is routed into the Basin.

Drainage from BP's tank dike areas located in the eastern and southern portions of the property (BP1) is discharged by gravity flow through a series of catch basins, valves, and piping to the storm water staging area located in the southwest portion of the BP property. The flow is clockwise around the perimeter of the site, from the Tank 1 dike area located in the northeast corner of the site and through other dikes to the staging area. Valves between the tank dikes are normally closed. These valves are opened as necessary to drain the dikes after a rain event. The valve at the staging area outfall is locked in the closed position. The staging area for the tank dike runoff also receives storm water runoff from a small portion of the Comstock residential complex located south of the BP property. Water that accumulates in this staging area is released to the Basin periodically as needed, after being visually inspected for a sheen or any other obvious signs of contamination. BP's practice is to keep the staging area dry; the frequency and intensity of rainfall events dictates the frequency with which the outfall valve is opened.

Storm water from the grassy/bermed area between the office and tank dike area (BP3) flows into the Colonial Avenue storm sewer ditch, and ultimately into the Basin. Storm water from BP's office/parking area (BP2) flows directly to the Basin through a series of drains located in the office and truck parking lots. Water from BP's loading rack canopy flows through this same series of drains.

Management of water generated by specific facility activities is described below. Wastewater from BP's office leaves the property through sanitary sewer lines. Maintenance bay floor drains are piped directly to the oil/water separator; however, the drains are currently blocked. Water and foam from fire tests and spill clean-ups discharges to the oil/water separator via the loading rack floor drains. Water from the loading rack floor drains discharges by gravity flow to the rack oil/water (oil/water) separator located south of the maintenance shop. Oil from the separator is skimmed into a 10,000-gallon underground holding tank, and water from the

separator discharges to a 37,000-gallon holding vault. The discharge from this vault is designated at Outfall 101.



Groundwater generated during monitoring activities conducted at the BP property is stored in a tank trailer or above ground holding tank. The groundwater is trucked off site and disposed by a subcontractor to BP. If it becomes necessary to discharge this water (approximately 1,400 gallons per year) to the JBC Basin, the JBC will notify the VDEQ and predischarge sampling will be conducted. Tank bottom water is piped from each storage tank to a lined sump; a pump transfers the water and recoverable hydrocarbons to an above ground storage tank located inside a containment dike. The contents of the tank are trucked off site.

# 3.2.2 TransMontaigne

TransMontaigne (TM) occupies 18.4 acres in the northeast quadrant of the Terminal Complex. As shown in Figure 3-4, there are six drainage sub-areas for surface water runoff at the TM facility, each of the following areas eventually contributes runoff to the Basin: the open space located along the northern portion of the property (drainage area TM1 on Figure 3-4); the office parking lot and driveway (TM2); the area located along the south and west perimeters of the property, outside the bermed tank area (TM3); the bermed storage tank area (TM4a and TM5b); and the truck parking area and loading racks (TM5). In addition, water generated through specific activities conducted at the site is managed in various ways, and some water discharges to the Basin.

Water from the open space adjoining Pickett Road and from the northern part of the property (TM1) flows overland and enters the storm sewer in the northern part of the property, which subsequently flows west into the Basin. This storm sewer also carries storm water runoff from Pickett Road and several adjoining commercial businesses located to the east. Some runoff from wooded land located to the north of the TM facility may also flow into this storm sewer (Figure 3-1, OFF7).

Water from TM's office and parking lot area (TM2) flows into the Colonial Avenue runoff channel located immediately south of the TM facility, eventually entering the

Basin at its western end. Runoff from the area located south and west of the bermed tank area (TM3) flows into the Basin through a concrete-lined channel and storm sewer located along the western border of the TM facility. This channel also receives runoff from portions of the CITGO property.

The bermed tank area (TM4a and TM5b) drains to a holding basin within the bermed area, and is then pumped, as needed, to the separator located immediately northeast of the bermed area. The truck parking area and loading racks (TM5) are also drained to the oil/water separator. Water from the separator discharges to the storm sewer, which drains the northern portion of the property into the Basin. The discharge from the separator is considered Outfall 102. Additionally, there is an overflow outlet on the west side of the holding basin that is used only in times of severe precipitation. This outlet is designated Outfall 103.

Currently, water from fire tests or spill clean-ups at TM's loading racks is routed to the oil/water separator. However, a "Product Contact Water" (PCW) recovery system has been installed and will be activated upon completion of a canopy for the Tank Truck Loading Rack. After activation, any collected PCW will be diverted to Tank 107 instead of discharging to the oil/water separator. Collected PCW will be trucked off-site for disposal.

Groundwater from monitoring activities is tested and then disposed off site. Tank bottom water is pumped from the large storage tanks to a dedicated storage tank, and then shipped off site for disposal following testing. Wastewater from TM's office leaves the property through via sanitary sewer lines.

# 3.2.3 **CITGO**

CITGO operates an approximately 15.5 acre facility in the northwest quadrant of the Terminal Complex. As shown on Figure 3-5, storm water runoff from the following six separate drainage sub-areas located on the CITGO property drains to the Basin: the parking lot located east of the loading rack, and the hill along the eastern border (drainage area CI1 on Figure 3-5); the office/parking lot area (CI2); the grassy area located west of the office (CI3); the

grassy diked area located west of the large storage tanks (CI4); the diked tank area (CI5); and the area located along the northern edge of the property (CI6).

Water from the CITGO parking lot located east of the loading rack, and from the hill on CITGO's property located adjacent to TM (CI1), flows into a drainage channel that runs to the north between the TM and CITGO properties, and then into the Basin. Storm water runoff from the CITGO office/parking lot area (CI2) drains toward Colonial Avenue where it flows into a culvert that empties into the Basin. Storm water runoff from the grassy area west of CITGO's office (CI3) drains into culverts located along the southern and western edges of the property, which carry the water to the Basin. These culverts also carry water from non-CITGO areas to the Basin, including runoff from part or all of the BP, TM, and MOTIVA properties; Colonial Avenue; and the Comstock and Lyndhurst residential developments located off-site. The culvert also passes through and collects runoff from the grassy diked area located west of CITGO's large storage tanks (CI4) before passing into the Basin area. Runoff from the area located along the northern edge of the CITGO property (CI6) flows directly into the Basin.

Water that does not flow directly into the Basin is handled as follows. Wastewater from CITGO's office leaves the property via sanitary sewer lines. Storm water runoff from CITGO's diked tank area (CI5) is manually pumped to the Basin after visual inspection by CITGO personnel. Runoff from under CITGO's loading rack drains by gravity to a 500-barrel holding tank, as does loading rack water from fire tests or spills and tank bottom water. Water from this tank is periodically hauled off-site for disposal.

CITGO has entered into a lease agreement with the City of Fairfax. Approximately 1.5 acres of CITGO's land is being used by the Fairfax Police and Fire Departments for training activities. In August 2005, a pre-fabricated steel training tower will be installed, in addition to a single story portable classroom, an automobile extrication training pad, an industrial confined-space entry simulator, a roof operations simulator, and a fire extinguisher simulator area. No new plumbing facilities will be constructed for this facility.

In 2009, CITGO plans to finish some grading activities on their property. This change might influence surface water runoff to drain predominantly through drainage area CI4

instead of CI5. This will not impact the nature of discharges or water quality for discharges from the CITGO property to the basin.

# **3.2.4 MOTIVA**

MOTIVA occupies approximately 19.1 acres in the southeast quadrant of the Terminal Complex. Nearly all storm water runoff from MOTIVA's facility flows into a retention pond on MOTIVA property, or to the Pickett Road storm sewer. No off-site properties contribute runoff to this facility. As shown on Figure 3-6, two small areas (drainage areas MO1 and MO2 on Figure 3-6) totaling approximately 0.8 acres, located along the northern portion of the MOTIVA facility, drain into the Colonial Avenue storm drain, and ultimately to the Basin.

The remainder of the property consists of seven specific drainage areas. Runoff from MOTIVA's office area drains into the Pickett Road storm sewer located immediately east of the property. Runoff from MOTIVA's offices and warehouse, from the paved area located west of the warehouse, and from the paved area located between the offices and the pond (MOs A, B, and E, respectively), is collected and carried to the MOTIVA surface water retention pond (MOTIVA pond) through storm sewer lines. Water collected in the bermed tank area (MO C) is pumped to the lower oil/water separator and then discharges from the MOTIVA pond under a VPDES permit. The rack area runoff is also discharged from the MOTIVA pond under the same VPDES permit, after passing through the 10,000-gallon Spill Prevention, Control, and Countermeasures (SPCC) separator and the upper oil/water separator. Runoff from around the MOTIVA pond (MO D) flows overland directly into the pond. The MOTIVA pond discharges to a paved ditch and then to Crook Branch under a VPDES permit.

Water from truck and trailer washing activities and tank bottom water collected from the storage tanks is hauled off site, as needed. Water from fire tests or spill cleanups passes through the separator to the pond.

Groundwater obtained as part of observation and remediation activities at the facility is either treated and discharged to the pond or hauled off-site.

When the MOTIVA facility was built, the tank farm and truck loading rack areas drained storm water runoff to the south. Storm water was allowed to follow its own flow path depending on the location within the facility. Only the areas located north of the tank farm and in the vicinity of the warehouse drained to the north into the Basin.

These areas previously totaled approximately 1.6 acres. Over the years, the area that drains to the north has been reduced by MOTIVA. The current total area draining to the Basin is approximately 0.8 acres.

Faci City Receive Wate Is this face more of the 1. Power of 2. A nuclear 3. Cooling of flow rater	/ County: Fairfaing Water: Danie	Basin Corpora ax / Fairfax Co els Run, UT A15R  ower plant (sic =4 stics? not using a cooling plant 25% of the recei	911) with one or cond/lake) ving stream's 7Q10	Is this popula			o status Char	nge
	R 1: Toxic Pollut							
PCS SIC (		Primary Sid		fl	Other Sic Code	es:		
Industrial	Subcategory Code:	000	(Code 000 i	f no subca	tegory)			
Determine	e the Toxicity potential	from Appendix A.	Be sure to use	the TOTAL	. toxicity potentia	al column and check one)		
Toxicity	·	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
No pro waste	cess streams	0	3.	3	15	7.	7	35
1.	1	5	4.	4	20	<b>X</b> 8.	8	40
2.	2	10	5.	5	25	9.	9	45
			6.	6	30	10.	10	50
						Code Number Che	ecked:	8
						Total Points Fac	tor 1:	40
FACTO	R 2: Flow/Stream	Flow Volume	e (Complete eithe	er Section	A or Section B;	check only one)		
Section A	– Wastewater Flow O	nlv considered			Section B – Wa	stewater and Stream Flo	w Considered	i
W	astewater Type ee Instructions)	Code	Points		ewater Type nstructions)	Percent of Instream Waste Receiving Stream	ewater Concent	
Type I:	Flow < 5 MGD	11	0	,	•		Code	Points
	Flow 5 to 10 MGD	12	10	T	ype I/III:	< 10 %	41	0
	Flow > 10 to 50 MGE	<u> </u>	20			10 % to < 50 %	42	10
	Flow > 50 MGD	14	30			> 50%	43	20
Type II:	Flow < 1 MGD	21	10	٦	Гуре II:	< 10 %	51	0
	Flow 1 to 5 MGD	<b>X</b> 22	20			10 % to < 50 %	52	20
	Flow > 5 to 10 MGD	23	30			> 50 %	53	30
	Flow > 10 MGD	24	50					
Type III:	Flow < 1 MGD	31	0					
	Flow 1 to 5 MGD	32	10					
	Flow > 5 to 10 MGD	33	20					
	Flow > 10 MGD	34	30					
						Code Checked from Sec	tion A or B:	22
						Total Points	_	20

# **FACTOR 3: Conventional Pollutants**

(only when limited by the perm	it)							
A. Oxygen Demanding Polluta	nts: (check one)	BOD	COD		X Other:	N/A		
Permit Limits: (check one)				Code	Points	3		
(		< 100 lbs/day		1	0			
		100 to 1000 lbs/day		2	5			
		> 1000 to 3000 lbs/day	1	3 4	15 20			
	·	> 3000 lbs/day		4				
					Code N	umber Checke		N/A
						Points Score	d:	0
B. Total Suspended Solids (TS	SS)							
Permit Limits: (check one)				Code	Points	3		
(	<b>X</b> .	< 100 lbs/day		1	0			
		100 to 1000 lbs/day		2	5			
		> 1000 to 5000 lbs/day	1	3	15			
	:	> 5000 lbs/day		4	20			
					Code N	umber Checke	d:	1
						<b>Points Score</b>	d:	0
C. Nitrogen Pollutants: (check	one)	Ammonia	X Othe	r: <u>N/A</u>				
Permit Limits: (check one)	,	Nitrogen Equivalent		Code	Points	<b>S</b>		
		< 300 lbs/day		1	0			
		300 to 1000 lbs/day > 1000 to 3000 lbs/day	,	2 3	5 15			
		> 1000 to 3000 ibs/day > 3000 lbs/day	1	4	20			
		,				umber Checke	d:	N/A
						<b>Points Score</b>	d:	0
					Total F	Points Factor	3:	0
FACTOR 4: Public Heal Is there a public drinking water the receiving water is a tributar ultimately get water from the a	supply located wry)? A public drin	king water supply maj upply.	ream of the ef y include infilt	fluent disci ration galle	harge (this inc eries, or other r	lude any body nethods of con	of water veyance	to which that
YES; (If yes, check toxicity	potential numbe	er below)						
X NO; (If no, go to Factor 5)								
Determine the <i>Human Health</i> the <i>Human Health</i> toxicity grou			ne SIC doe a	nd subcate	gory reference	as in Factor 1	. (Be su	re to use
Toxicity Group Code	Points		Code Poi	nts	Toxicity	Group (	Code	Points
No process waste streams 0	0	3.	3 0	)		7.	7	15
1. 1	0	4.	4 0	)		8.	8	20
2. 2	0	5.	5 5	;		9.	9	25
		6.	6 1	0		10.	10	30
					Code N	umber Checke	d:	N/A
						Points Factor		0

# **FACTOR 5: Water Quality Factors**

Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technologybase federal effluent guidelines, or technology-base state effluent guidelines), or has a wasteload allocation been to the discharge

	Code	Points
X YES	1	10
NO	2	0

Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?

	Code	Points
X YES	1	0
NO	2	5

Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent C toxicity?

YES	Code 1	Points 10
X NO	2	0

Code Number Checked: Points Factor 5:

# **FACTOR 6: Proximity to Near Coastal Waters**

A. Base Score: Enter flow code here (from factor 2)

Check a	ppropriate fa	acility HPRI code	e (from PCS):	Enter the multiplication factor that corre	esponds to the flow code: 0.30
	HPRI#	Code	HPRI Score	Flow Code	Multiplication Factor
	1	1	20	11, 31, or 41	0.00
				12, 32, or 42	0.05
	2	2	0	13, 33, or 43	0.10
				14 or 34	0.15
X	3	3	30	21 or 51	0.10
				22 or 52	0.30
	4	4	0	23 or 53	0.60
				24	1.00
	5	5	20		
HP	RI code che	cked: 3			

Base Score (HPRI Score): Χ (Multiplication Factor) 30 0.30

B. Additional Points – NEP Program For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

C. Additional Points - Great Lakes Area of Concern For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 area's of concern (see instructions)?

	Code	Points					Code	Points	
	1	10					1	10	
X	2	0				X	2	0	
	Co	de Number Checked:	Α	3	В	2		C 2	

Points Factor 6:

Attachment 4 Page 3 of 4

# **SCORE SUMMARY**

<u>Fac</u>	tor	<u>Description</u>	Total Points	
1		Toxic Pollutant Potential	40	
2		Flows / Streamflow Volume	20	
3		Conventional Pollutants	0	
4		Public Health Impacts	0	
5		Water Quality Factors	10	
6	P	oximity to Near Coastal Waters	9	
		TOTAL (Factors 1 through 6)	79	
	re equal to or grater than 80	YES; (Facility is a Major)	X NO	
X NO YES; (Add Reason:	500 points to the above scor	e and provide reason below:		
NEW SCORE :OLD SCORE :	79 70			
		Permit Reviewer's	Name : Susan Mackert	

Phone Number: (703) 583-3853

Date: September 21, 2009

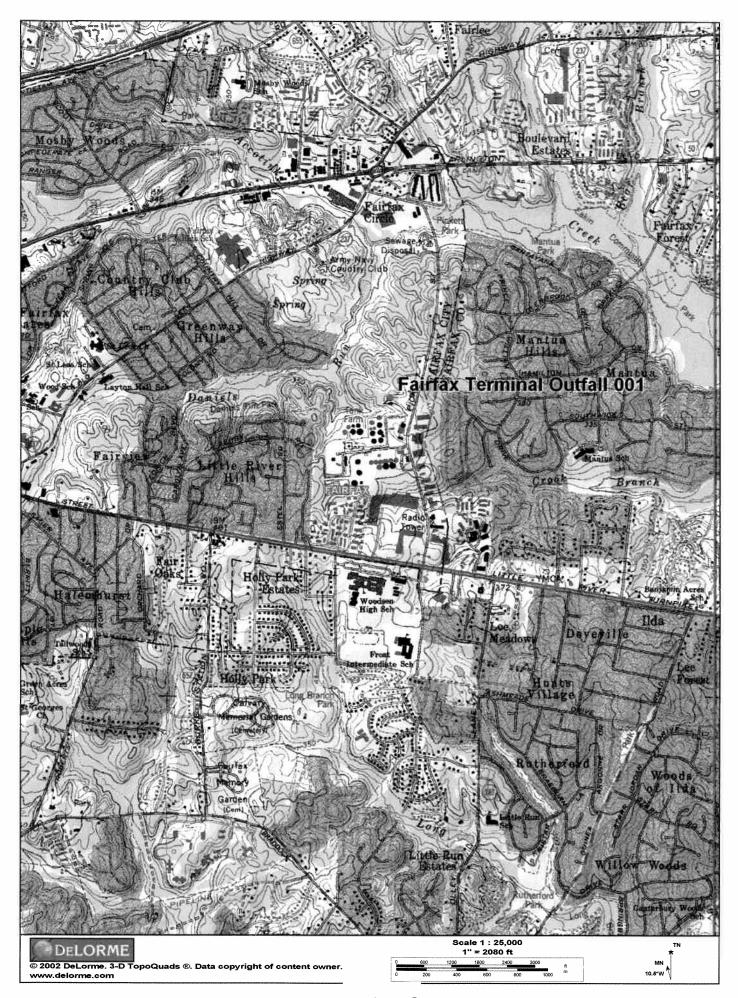


Table 3-1
Materials Inventory

			Approximate Capacity	
Outfall Number	Company	Tank Number	(gallons)	Product Stored
001	BP	1	3,020,682	Premium Gasoline
		2	2,442,972	Gasoline
		3	907,158	Premium Gasoline
		4	4,381,818	Gasoline
		5	1,506,246	Ethanol
		6	2,946,216	Diesel
VICE		7	10,000	Detergent Gasoline Additive
		8	10,000	Recoverable Hydrocarbon With Water
		9	10,000	Recoverable Hydrocarbon With Water
		10	4,000	Diesel Additive
		11	10,000	Detergent Gasoline Additive
		12	3,000	Diesel Lubricity Additive
		13	7,000	Additive (currently empty)
	TM	101	2,440,681	RUL
		102	2,440,100	Regular RFG Unleaded
		103	3,429,051	No. 2 (Ultra Low Sulfur)
		104	2,449,011	No. 2 (Ultra Low Sulfur)
		105	2,368,648	Premium RFG Gasoline
		106	211,410	Ethanol
		107	16,360	PC Water
		108	4,000	Additive
		109	586,484	Ethanol
		110	853,189	Diesel
		111	3,429,936	RBOB
		112	3,455,284	RFG Gasoline
		113	10,000	Additive
		114	966	Rack Overflow
		115	4,000	Additive
		116	2,000	Low Sulfur Diesel
		117-c1a	1,441	Diesel Additives
		117-c1b	3,008	Diesel Additives
		Unnumbered	500	Waste Oil
		Unnumbered	500	Heating Fuel Oil
	CITGO	1	3,444,000	Regular Unleaded Gasoline
		2	1,050,000	Ethanol

**Table 3-1 (Continued)** 

Outfall Number	Company	Tank Number	Approximate Capacity (gallons)	Product Stored
	CITGO	3	1,470,000	Premium Unleaded Gasoline
		4	5,124,000	#2 Fuel Oil
		5	21,000	Slop Oil
		6	2,310,000	Unleaded Gasoline
		7	3,528,000	Ultra-Low Sulfur Diesel
		8	3,780	Remediation
		9	8,988	Gasoline Additive
		10	3,612	Pourback
		11	2,982	Premium Dist. Additive
		12	546	Red Dye
		14	9,500	Lubricity Additive
	MOTIVA	None	NA	NA

NOTE: This table only includes materials stored on property that drains to the Storm Water Impoundment Basin

# Attachment 7 Page 1 of 5

# FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Fairfax Terminal Permit No.: VA0001872

Receiving Stream: Daniels Run, UT

Version: OWP Guidance Memo 00-2011 (8/24/00)

		:	i
:		:	
i i i	•	ı	1
8.1E-03		:	1
1.6E+01		1	1
1	,	1	1
1.9E+03	,	1	1 1
1.4E+03		1	1 1 1
2.2E+01	1	1	1 1
6.5E+04		ı	1
5.3E+00		1	
1.8E-01		1	1
t.8E-01	,	!	1 1
1.8E-01		1	1
1.8E-01			1
2.0E-03	1	;	1
5.1E+02		:	1 1
:		1	;
1		1	1
6.4E+02		;	;
4.0E+04		1	1
1		1	1
1		ı	:
5.0E-04		1	1
2.5E+00			1
9.3E+00		1	
	. 1	-	1
HH Acute Chronic HH (PWS)	_	HH Acute C	Acute
Antidegradation Baseline			Antidegradation Allocations
			Discharge Flow =
- 30Q10 Mix =		0 %	%
Wet Season - 1Q10 Mix =		0 %	
- 30Q10 Mix =		0 %	
- 7Q10 Mix =		0 %	0 % 90% Temp (Annual) =
Annual - 1Q10 Mix =		0 %	%
Mixing Information			Effluent Information

Parameter	Background		Water Quality Criteria	ity Criteria			Wasteload	Wasteload Allocations	9		Antidegrada	Antidegradation Baseline		Ą	ntidegradatio	Antidegradation Allocations			Most Limitin	Most Limiting Allocations	*
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	王	Acute	Chronic	HH (PWS)	Ŧ	Acute	Chronic	HH (PWS)	圭	Acute	Chronic	Chronic HH (PWS)	王	Acute	Chronic	HH (PWS)	Ξ
Chlorodibromomethane <sup>C</sup>	0	1		na	1.3E+02	:	:	na .	1.3E+02	ı	;	ſ	ı	:	:		,	,	-	na	1.3E+02
Chloroform	0	;	1	na	t.tE+04	;	:	na	1.tE+04	ŀ	:	;	:	:	ı	1	;	1	ı	na	1.1E+04
2-Chloronaphthalene	0	ł	ı	na	1. <b>6</b> E+03	;	ı	na	1. <b>6</b> E+03	;	:	1	;	;	1	ŀ	1	ı	ŧ	na	1.6€+03
2-Chlorophenol	0	;	1	na	1.5E+02	1	ı	na	1.5E+02	,	ì	ì	;	ı	ı	1	1	:	:	na	1.5€+02
Chlorpyrifos	0	8.3E-02	4.1E-02	na	:	8.3E-02	4.1E-02	na	1	1	1	:	ı	1	ı	:	1	8.3E-02	4.1E-02	na	ı
Chromium III	0	3.2E+02	4.2E+0t	na	;	3.2E+02	4.2E+01	na	:	;	ı	;	1	!	1	:	1	3.2E+02	4.2E+01	a	t
Chromium VI	0	t.6E+01	1.1E+01	na	1	1.6E+01	1.1E+01	na	:	ì	ı	:	1	:	ı	:	1	1.6E+01	1.1 <b>E</b> +01	na a	ŧ
Chromium, Total	0	1	:	1.0E+02	1	;	i	na	:	1	ì	ı	1	1	:	1	:	ı	ı	na	ı
Chrysene <sup>c</sup>	0	:	i	na	1.8E-02	:	ı	na	1.8E-02	ı	;	:	:	1	;	1	;	ı	i	na	1.8E-02
Copper	0	7.0E+00	5.0E+00	na	:	7.0E+00	5.0E+00	na	:	:	:	ı	:	1	;	ı	:	7.0€+00	5.0€+00	na a	1
Cyanide, Free	0	2.2E+01	5.2E+00	na	1.6E+04	2.2E+01	5.2E+00	na	1.6E+04	;	1	:		ı	1	;	!	2.2€+01	5.2E+00	na	1.6E+04
DDD°	0	1	1	na	3.1E-03	1	;	na	3.1E-03	:	ı	;	1	1	ı	:	1	ı	1	na a	3.1€-03
DDEC	0	:	1	na	2.2E-03	;	:	na	2.2E-03	1	1	:	ı	:	;	;	;	ı	ı	na	2.2 <b>E</b> -03
DDTC	0	1.1E+00	1.0E-03	na	2.2E-03	1.1E+00	1.0E-03	na	2.2E-03	1	1	;	;	;	:	1	:	1.1E+00	1.0E-03	na	2.2E-03
Demeton	0	í	1.0E-01	na	:	1	1.0E-01	na	1	:	1	ŧ	:	ı	1	1	1	:	1.0E-01	na	ı
Diazinon	0	1.7E-01	1.7E-01	na	:	1.7E-01	1.7E-01	na	ı	1	1	;	;	:	i	:	;	1.7 <b>E-</b> 01	1.7E-01	na	1
Dibenz(a,h)anthracene <sup>C</sup>	0	;	ı	na	1.8E-01	ı	1	na	1. <b>8</b> E-01	,	1	1	:	i	į	;	1	ı	1	na	1.8E-01
1,2-Dichlorobenzene	0	;	ı	na	1.3E+03	:	ı	na	1.3E+03	i	:	1	;	ı	1	1	ı	1	1	na	1.3E+03
1,3-Dichlorobenzene	0	;	ł	na	9.6E+02	1	1	na	9.6E+02	;	:	ı	;	;	;	1	!	ı	1	na	9.6E+02
1,4-Dichlorobenzene	0	ı	;	na	t.9E+02	ı	ì	na	1.9E+02	ŀ	1	:	1	;	1	;	1	ı	ł	∩ a	1.9€+02
3,3-Dichlorobenzidine <sup>C</sup>	0	;	:	na	2.8E-01	;	:	na	2. <b>8</b> E-01	1	;	;	;	:	į	;	:	1	1	na	2.8E-01
Dichlorobromomethane <sup>C</sup>	0	t	;	na	1.7E+02	;	ı	na	1.7E+02	;	1	1	:	ı	;	:	;	ı	ı	na	1.7E+02
1,2-Dichloroethane '	0	1	1	na	3.7E+02	1	;	na	3.7E+02	:	ı	ı	1	1	;	ı	1	ı	ı	na	3.7E+02
1,1-Dichloroethylene	0	1	:	na	7.1E+03	1	,	na	7.1E+03	ı	1	;	1	ì	:	1	1	ı	1	na	7.1E+03
1,2-trans-dichloroethylene	0	;	ſ	na	1.0E+04	ı	1	na	1.0E+04	1	:	ı	:	ŀ	1	;	ı	ı	1	na	1.0E+04
2,4-Dichlorophenol	0	;	;	na	2.9E+02	;	;	na	2.9E+02	i	ı	ı	1	ŀ	ı	;	ı	ı	1	na	2.9€+02
acetic acid (2,4-D)	0	:	:	na	;	ŀ	ı	na	1	ı	:	1	;	1	ı	į	1	t	1	na	t
1,2-Dichloropropane <sup>C</sup>	0	ŧ	1	na	t.5E+02	ı	;	na	1.5E+02	;	1	i	1	ı	:	1	1	1	ı	na	1.5E+02
1,3-Dichloropropene <sup>C</sup>	0	;	1	na	2.1E+02	1	;	na	2.1E+02	;	1	;	;	;	:	1	1	ı	ı	വമ	2.1E+02
Dieldrin <sup>C</sup>	0	2.4E-01	5. <b>6</b> E-02	na	5.4E-04	2.4E-01	5.6E-02	na	5.4E-04	;	1	1	1	;	1	1	1	2.4E-01	5.6E-02	na	5.4E-04
Diethyl Phthalate	0	1	1	na	4.4E+04	ı	:	na	4.4E+04	1	ı	ł	,	;	;	1	1	1	i	na	4.4E+04
2,4-Dimethylphenol	0	;	ı	na	8.5E+02	ţ	ı	na	8.5E+02	:	ï	ı	1	;	;	i	1	ı	ı	na	8.5E+02
Dimethyl Phthalate	0	1	1	na	1.1E+06	ı	:	na	1.1E+06	;	ł	:	;	1	1	i	1	ł	ı	na	1.1E+06
Di-n-Butyl Phthalate	0	1	ı	na	4.5E+03	ı	;	na	4.5E+03	;	1	:	:	;	ı	:	ı	:	ı	na	4.5E+03
2,4 Dinitrophenol	0	ı	1	na	5.3E+03	1	;	na	5.3E+03	1	ı	;	ı	ŧ	:	ı	1	1	ı	a	5.3E+03
2-Methyl-4,6-Dinitrophenol	0	;	ł	na	2.8E+02	;	;	na	2.8E+02	i	;	;	1	ı	ì	:	!	ı	1	a	2.8E+02
2,4-Dinitrotoluene C Dioxin 2,3,7,8-	0	1	ŧ	na	3. <b>4</b> E+01	:	:	na	3.4E+01	;	ı	;	1	1	:	;	;	1	1	na	3.4E+01
tetrachlorodibenzo-p-dioxin	0	ı	1	na	5.1E-08	;	!	na	5.1E-08	;	1	;	1	:	ı	;	1	ı	ŧ	na	5.1E-08
1,2-Diphenylhydrazine <sup>C</sup>	0	;	;	na	2.0E+00	:	;	na	2.0E+00	1	1	1	;	ı	i	1	:	1	i	na	2.0E+00
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8. <b>9</b> E+01	ł	:	;	;	}	}	;	:	2.2E-01	5.6E-02	na	8.9E+01
Beta-Endosulfan	0	2.2E-01	5. <b>6</b> E-02	na	8.9E+01	2.2E-0t	5.6E-02	na	8.9E+01	1	;	ı	;	1	1	1	;	2.2E-01	5.6E-02	na	8.9€+01
Alpha + Beta Endosulfan	0	2.2E-01	5. <b>6</b> E-02	:	1	2.2E-01	5.6E-02	i	1	}	;	1	!	ı	1	ı	1	2.2E-01	5.6E-02	:	;
Endosulfan Sulfate	0	1	1	na	8.9E+01	ŧ	ŀ	na	8.9E+0t	;	i	;		;	ŀ	:	1	ı	ı	na	8.9E+01
Endrin		8. <b>6</b> E-02	3. <b>6</b> E-02	na	6.0E-02	8. <b>6</b> E-02	3. <b>6</b> E-02	na	6.0E-02	1	;	ı	ŀ	ı	ı	;	1	8.6E-02	3.6€-02	na	6.0E-02
Clidili Aldenyde	0	-:	,	na	3.0E-01	:	1:	na	3.0E-01	:	-				:	:	ŀ	ı	***	na	3.0E-01

(ug/l unless noted)	Come	Acute	Chronic HH (PW/s)	L (BIVIC)	-		Chronic HH (PW/S)	(DIMC)	Ē	- 1	Chronic HH (DM/C)	-	+		Or a	- 1	+	_		1
( B) ( C) ( C) ( C)	COLE.		Callediac [nn (rws)	(CAAA)	=	Acute	CHOILE DE	1111 (1 840)	FIFT	Acute	On one	HH (PWS)	=	Acute	Tronic   HH (		H Ac	Acute Ch	Chronic HH (I	HH (PWS)
Ethylbenzene	0	;	;	na	2.1E+03	1	1	na 2	2.1E+03	1	ı			1	-		-			22
Fluoranthene	0	ł	;	na	1.4E+02	1	1		1.4E+02	1	1	ſ		1	i		*********	1		
Fluorene	0	ı	1	na	5.3E+03	}	ŧ	na E	5.3E+03	1	1	;		1	1	1				
Foaming Agents	0	1	i	na	1	t	1	กล	:	t	ı	1	!	1	1	1			1	<u> </u>
Guthion	0	ł	1.0E-02	na	1		1.0E-02	na	1	1	1	1	-	1	l		<u>'</u> 	- 1.0	1.0E-02 n	E I
Heptachlor <sup>C</sup>	0	5.2E-01	3.8E-03	na	7.9E-04	5.2E-01	3.8E-03		7.9E-04	1	ł	1	-	1	1		5.2	5.2E-01 3.8	3.8E-03 n	a 7.9 <b>E-</b> 04
Heptachlor Epoxide <sup>C</sup>	٥	5.2E-0t	3.8E-03	na			3.8E-03		3.9E-04	1	;	1		1	1	,	5.2E-01		3.8E-03 n	a 3.9E-04
Hexachlorobenzene <sup>C</sup>	0	1	,	na	2.9E-03		1		2.9E-03	ı	1	ľ		:	1		. 1			a 2,9E-03
Hexachlorobutadiene <sup>C</sup>	0	ı	1	na .	1.8E+02	:	1		1.8E+02	ı	;	1		;	1	,		ı		a 1.8E+02
Hexachiorocyclohexane Alpha-BHC <sup>C</sup>	0	ı	ı	na	4.9E-02	1	ì	na	4.9F-02	ı	1	i							,	
Hexachlorocyclohexane	4				1						:	1		,	1	,		٠	1	a 4.9E-02
Beta-BHC <sup>C</sup>	0	ı	1	na	1.7E-01	1	1	na 1	1.7E-01	1	1	ŧ		l	1			1		a 1.7E-01
Gamma-BHC <sup>C</sup> (Lindane)	0	9.5E-01	na	na	1.8E+00	9.5E-01	:	na 1	#F+00	ı	i						 > 2		i	
Hexachlorocyclopentadiene	0	1	ı				;		1 fF +03	!	•			!!	,		y.5n-0			a 1.8E+00
Hexachloroethane <sup>C</sup>	0	:	ŧ		3.3E+01	I	1		3.3E+01	1	ŧ	1		: :						. a.
Hydrogen Sulfide	0	1	2.0E+00	na	1		2.0E+00		1	1	;	1		1	1				2.0E+00 n	
Indeno (1,2,3-cd) pyrene <sup>C</sup>	0	f	;	na	1.8E-01	1	ł	na 1	1.8 <b>E</b> -01	ı	1	1		1		,				a 1.8E
Iron	0	1	į	na	ı	ı	1	na		ı	1	1		;		,	·····	I	; p	D.
Isopilorone	· c	ı	)    }  }	na	9.6E+03		;	na 9	9.6E+03	1	ŧ			1		,			:	a 9.6E+03
Lead	o c	4.9E+01	5.6F+00	n na		4 9F±01 5	0.0E+00	กล				1		1		i	· 		0.0E+00 n	1
Malathion	0	1	1.0E-01	na :			1.0E-01	na i	}	ł	l		-	1			#.9 <b>F</b> +01		1.0F-01 n	1 I
Manganese	0	ı	1	na	!		1	na	1	;	I	1	-	f			·		2	1
Mercury	0	1.4E+00	7.7E-01	;	:	1.4E+00 7	7. <b>7</b> E-01	1	!	1	1	;	1	[		,	1.4E+00		7.7E-01	:
Methyl Bromide	0	ï	1	na 1	1.5E+03	1	1	na 1	1.5E+03	ť	1	1		1	1	•				a 1.5E+03
Methylene Chloride <sup>C</sup>	0	ı	1	na 5	5.9E+03	1	I	na 5	5.9E+03	;	1	1	-	ı		,	ı		1	a 5.9E+03
Methoxychlor	0	i	3.0E-02	na	1	۱ د	3.0E-02	na	ı	1	!			1	1				3.0E-02 na	1
Mirex	0	1	0.0E+00	na	1	0	0.0E+00	na		ı	:	1		1	:	,			≣+00 na	ns I
Nickel	0	1.0E+02	1.1E+01	na 4	4.6E+03 1	1.0E+02 1.	1.1E+01	na 4	4. <b>6E</b> +03	ı	;	;		;	,		1.0E+02		1.1E+01 na	a 4.6E+03
Nitrate (as N)		ŀ	;	na	;	ı	ŧ	na	:	1	1	1		1	1				- n	1
N-Nitrosodimethylamine <sup>C</sup>	- c		1 1		9.96+02	1	1	_	6.9E+02	ł	;	1		1	,					a 6.9E+02
N-Nitrosodiphenylamine <sup>C</sup>	0	1	1	na i	6.0E+01	l	:	na i	6.0E+01	: :	:			1 1						3.01.01
N-Nitrosodi-n-propylamine <sup>C</sup>	0	ı	1		5.1E+00	1	1		5.1E+00	1	1	1		ı			1		7.	5.1E+00
Nonyiphenol	0	2.8E+01	6.6 <b>E</b> +00	1	1	2.8E+01 6.	6.6E+00	na	1	1	1	1	,	1			2.8E+01	6.6	:+ <b>0</b> 0 na	ı
Parathion	0	6.5E-02	1.3E-02	กล	,	6.5E-02 1.	1.3 <b>E</b> -02	na	!	1	1	f		;		,	6.5E-02		1.3E-02 na	
PCB Total	0	ı	1.4E-02	na 6			1.4 <b>E-</b> 02	na 6	6.4E-04	1	1	1		1	;	i			1.4E-02 na	6.4E-04
Pentacniorophenol "		7. <b>7</b> E-03	5.9E-03	na 3		Ċ	5.9E-03	na 3.	3.0E+01	1	1	;		;	1		7.7E-03	:-03 5.9E-03	₌-03 na	3.0€+01
Phreno	- c	1 1	1 1	na 4	8.6E+05	1	1		8.6E+05	1	;	;		1	:				na	8.6E+05
Radionuclides		1 1	: :	_	4.05+03		1		4.0E+03	1	1	:		f	,	,			na na	4.0E+03
Gross Alpha Activity	, ,	i		ā		ı	;	na	1	1	1	1		1					na	ı
Beta and Photon Activity	c	ı	1	na	!	!	1	na	1	1	1			1	!				na	ı
(mrem/yr)	0	ŧ	ł	na 4	4.0E+00	1	1	na 4.	4.0E+00	1	1	1		1	1				- na	4.0E+00
Radium 226 + 228 (pCi/L)	0	1	1	na		ı	;	na	1	I	l	1		1					- na	
			!	na	:	1	;	na	1	ı	1	!			:				na	-

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i	×
ŀ	60
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1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise

6.5E+01

6.6E+0t

2.6E+04

6.5E+01

6.5E+01

6.6E+01

2.6E+04

- 2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
- Metals measured as Dissolved, unless specified otherwise
- 4. "C" indicates a carcinogenic parameter
- 5. Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
- Antidegradation WLAs are based upon a complete mix.
- 6. Antideg. Baseline = (0.25(WQC background conc.) + background conc.) for acute and chronic
- = (0.1(WQC background conc.) + background conc.) for human health
- 7. WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens and Harmonic Mean for Carcinogens. To apply mixing ratios from a model set the stream flow equal to (mixing ratio - 1), effluent flow equal to 1 and 100% mix.

	-			~~~				Ω	Ω					
Silver	Selenium	Nickel	Mercury	Manganese	Lead	Iron	Copper	Chromium VI	Chromium III	Cadmium	Barium	Arsenic	Antimony	Metal
4.2E-01	3.0€+00	6.8€+00	4.6E-01	na	3.4E+00	na	2.8E+00	6.4E+00	2.5E+01	3.9E-01	na	9.0€+01	6.4E+02	Target Value (SSTV)
												guidance	minimum QL's provided in agency	Note: do not use QL's lower than the

Zinc

2.6E+01

# 9/21/2009 11:47:55 AM

```
Facility = Fairfax Terminal
Chemical = Chlorine
Chronic averaging period = 4
WLAa = 0.019 mg/l
WLAc = 0.011 mg/l
Q.L. = 0.1
# samples/mo. = 1
# samples/wk. = 1
```

# Summary of Statistics:

```
# observations = 1
Expected Value = .2
Variance = .0144
C.V. = 0.6
97th percentile daily values = .486683
97th percentile 4 day average = .332758
97th percentile 30 day average = .241210
# < Q.L. = 0
Model used = BPJ Assumptions, type 2 data
```

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 1.60883226245855E-02
Average Weekly limit = 1.60883226245855E-02
Average Monthly LImit = 1.60883226245855E-02

The data are:

0.2 mg/l

### Public Notice - Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated industrial wastewater and storm water into a water body in Fairfax County, Virginia.

PUBLIC COMMENT PERIOD: November 21, 2009 to 5:00 p.m. on December 21, 2009

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Storm water issued by DEQ, under the authority of the State Water Control Board

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Joint Basin Corporation, 9601 Colonial Avenue, Fairfax, VA 22031, VA0001872

NAME AND ADDRESS OF FACILITY: Fairfax Terminal, 9601 Colonial Avenue, Fairfax, VA 22031

PROJECT DESCRIPTION: Joint Basin Corporation has applied for a reissuance of a permit for the private Fairfax Terminal. The applicant proposes to release treated industrial wastewater and storm water at a rate of 0.22 million gallons per day into a water body. The facility proposes to release the treated industrial wastewater and storm water in to an unnamed tributary to Daniels Run in Fairfax County in the Potomac River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, Total Suspended Solids, Total Petroleum Hydrocarbons, Total Residual Chlorine, Benzene, Ethylbenzene, Toluene, Total Xylenes, MTBE, and Naphthalene.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the documents at the DEQ-Northern Regional Office by appointment, or may request electronic copies of the draft permit and fact sheet.

Name: Susan Mackert

Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193 Phone: (703) 583-3853 E-mail: susan.mackert@deq.virginia.gov Fax: (703) 583-3821

# State "Transmittal Checklist" to Assist in Targeting Municipal and Industrial Individual NPDES Draft Permits for Review

# Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name:	Fairfax Terminal	
NPDES Permit Number:	VA0001872	
Permit Writer Name:	Susan Mackert	
Date:	September 21, 2009	

Major [ ] Minor [X] Industrial [X] Municipal [ ]

I.A. Draft Permit Package Submittal Includes:	Yes	No	N/A
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X	***************************************	
3. Copy of Public Notice?	X		
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?	X		
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?			X
8. Whole Effluent Toxicity Test summary and analysis?	X		
9. Permit Rating Sheet for new or modified industrial facilities?	X		

I.B. Permit/Facility Characteristics	Yes	No	N/A
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet <b>or</b> permit contain a description of the wastewater treatment process?	X		
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?	X		
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7. Does the fact sheet <b>or</b> permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and	X	,	
designated/existing uses?			
8. Does the facility discharge to a 303(d) listed water?	X	***************************************	
a. Has a TMDL been developed and approved by EPA for the impaired water?	X		
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?			X
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?		X	
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?	X		

I.B. Permit/Facility Characteristics – cont.	Yes	No	N/A
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?	X		
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?		X	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	X		
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined?	X		

# Part II. NPDES Draft Permit Checklist

# Region III NPDES Permit Quality Review Checklist - For Non-Municipals

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet <b>or</b> permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	x		
II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			X
II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?		X	
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?			X
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?	X		
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	X		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?	X		
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a "reasonable measure of ACTUAL production" for the facility (not design)?			X
5. Does the permit contain "tiered" limits that reflect projected increases in production or flow?		X	
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			X
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	X		
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?	X		
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		X	
II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?		X	
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	X		

	Limits – cont.	Yes	No	N/A
	calculation procedures for all pollutants that were found	to X		
have "reasonable potential"?	the "reasonable potential" and WLA calculations account			ļ
for contributions from unstream	sources (i.e., do calculations include ambient/backgroun	ed	***	
concentrations where data are a	sources (i.e., do carculations include ambient/backgroun	a	X	
	effluent limits for all pollutants for which "reasonable			
potential" was determined?	errident mints for an pondiants for which reasonable		X	
	consistent with the justification and/or documentation			ļ
provided in the fact sheet?	to consider that the justification and of documentation	X		
	ong-term (e.g., average monthly) AND short-term (e.g.,			
	istantaneous) effluent limits established?	X		
7. Are WQBELs expressed in the perr concentration)?	nit using appropriate units of measure (e.g., mass,	X		
	"antidegradation" review was performed in accordance won policy?	vith X		
II.E. Monitoring and Reporting Req	Ninoments	V.	NT-	DT/A
	ual monitoring for all limited parameters?	Yes	No	N/A
	that the facility applied for and was granted a monitoring	X		
	pecifically incorporate this waiver?	3		X
	al location where monitoring is to be performed for each			
outfall?	in location where momenting is to be performed for each	X		
3. Does the permit require testing for	Whole Effluent Toxicity in accordance with the State's	x		
standard practices?			<u> </u>	<u> </u>
II.F. Special Conditions		Yes	No	N/A
	nt and implementation of a Best Management Practices		- 110	
(BMP) plan or site-specific BMPs?		X		
a. If yes, does the permit adequatel	y incorporate and require compliance with the BMPs?	X		
	chedule(s), are they consistent with statutory and regulato			<u> </u>
deadlines and requirements?	(0), and analy a constraint outside y unit regulation	,		X
3. Are other special conditions (e.g., a	mbient sampling, mixing studies, TIE/TRE, BMPs, speci	al		<u> </u>
studies) consistent with CWA and l		X		
		Yes	No	N/A
II G Standard Conditions				
II.G. Standard Conditions	2 122 Al standard conditions or the State equivalent (or		,	
1. Does the <b>permit</b> contain all 40 CFF	2 122.41 standard conditions or the State equivalent (or	X	la la	
1. Does the <b>permit</b> contain all 40 CFF more stringent) conditions?	`	X		
<ol> <li>Does the permit contain all 40 CFF more stringent) conditions?</li> <li>List of Standard Conditions – 40 CFI</li> </ol>	R 122.41			
<ol> <li>Does the <b>permit</b> contain all 40 CFF more stringent) conditions?</li> <li>List of Standard Conditions – 40 CFI Duty to comply</li> </ol>	R 122.41 Property rights Reporting	Requirements		
<ol> <li>Does the <b>permit</b> contain all 40 CFF more stringent) conditions?</li> <li>List of Standard Conditions – 40 CFI Duty to comply</li> <li>Duty to reapply</li> </ol>	R 122.41 Property rights Reporting Duty to provide information Planne	Requirements ed change	nliance	
<ol> <li>Does the <b>permit</b> contain all 40 CFF more stringent) conditions?</li> <li>List of Standard Conditions – 40 CFI Duty to comply</li> </ol>	R 122.41  Property rights Reporting Duty to provide information Planne Inspections and entry Antici	Requirements ed change pated noncom	pliance	
<ol> <li>Does the <b>permit</b> contain all 40 CFF more stringent) conditions?</li> <li><b>List of Standard Conditions – 40 CFI</b> Duty to comply</li> <li>Duty to reapply</li> <li>Need to halt or reduce activity</li> </ol>	R 122.41  Property rights Reporting Duty to provide information Planne Inspections and entry Antici Monitoring and records Transf	Requirements ed change pated noncom	pliance	
<ol> <li>Does the <b>permit</b> contain all 40 CFF more stringent) conditions?</li> <li><b>List of Standard Conditions – 40 CFI</b> Duty to comply</li> <li>Duty to reapply</li> <li>Need to halt or reduce activity not a defense</li> </ol>	R 122.41  Property rights Reporting Duty to provide information Planne Inspections and entry Antici Monitoring and records Transf Signatory requirement Monitoring	Requirements ed change pated noncomers or some reports		
<ol> <li>Does the <b>permit</b> contain all 40 CFF more stringent) conditions?</li> <li><b>List of Standard Conditions – 40 CFI</b> Duty to comply</li> <li>Duty to reapply</li> <li>Need to halt or reduce activity not a defense</li> <li>Duty to mitigate</li> </ol>	R 122.41  Property rights Reporting Duty to provide information Inspections and entry Antici Monitoring and records Transf Signatory requirement Monitoring Bypass Complete	Requirements ed change pated noncomers oring reports liance schedul		
<ol> <li>Does the permit contain all 40 CFF more stringent) conditions?</li> <li>List of Standard Conditions – 40 CFI Duty to comply</li> <li>Duty to reapply</li> <li>Need to halt or reduce activity not a defense</li> <li>Duty to mitigate</li> <li>Proper O &amp; M</li> </ol>	R 122.41  Property rights Duty to provide information Inspections and entry Monitoring and records Signatory requirement Bypass Upset  Reporting Planne Antici Monitoring Antici Monitoring and records Completed 24-Ho	Requirements ed change pated noncomers or some reports	es	
1. Does the <b>permit</b> contain all 40 CFF more stringent) conditions? <b>List of Standard Conditions – 40 CF</b> Duty to comply  Duty to reapply  Need to halt or reduce activity  not a defense  Duty to mitigate  Proper O & M  Permit actions	Property rights Reporting Duty to provide information Inspections and entry Antici Monitoring and records Transf Signatory requirement Bypass Complete Upset 24-Ho Other	Requirements ed change pated noncomfers oring reports liance schedul ur reporting	es	
1. Does the <b>permit</b> contain all 40 CFF more stringent) conditions? <b>List of Standard Conditions – 40 CFI</b> Duty to comply  Duty to reapply  Need to halt or reduce activity not a defense  Duty to mitigate  Proper O & M  Permit actions  2. Does the permit contain the addition	R 122.41  Property rights Duty to provide information Inspections and entry Monitoring and records Signatory requirement Bypass Upset  Reporting Planne Antici Monitoring Antici Monitoring and records Completed 24-Ho	Requirements ed change pated noncomfers oring reports liance schedul ur reporting	es	

# Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	Susan Mackert	
Title	Environmental Specialist II Senior	
Signature	Lusan Market	
Date	September 21, 2009	